No. 01-963

(13)

SUPREME COURT, U.S.
FILED
JUN 17 2002
CLERK

IN THE
Supreme Court of the United States

NORFOLK & WESTERN RAILWAY COMPANY,
Petitioner,

v.

FREEMAN AYERS, *et al.*,
Respondents.

On Petition for a Writ of Certiorari to the Circuit Court of Kanawha County, West Virginia

JOINT APPENDIX
Volume One

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June 17, 2002

PETITION FOR CERTIORARI FILED JANUARY 2, 2002
CERTIORARI GRANTED APRIL 1, 2002

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NOTICE

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IN THE CIRCUIT COURT OF KANAWHA COUNTY,
WEST VIRGINIA

Case No. 92-C-16-8888

IN RE: ASBESTOS III,

RELEVANT DOCKET ENTRIES

DATE	PROCEEDINGS
2/06/95	# Mot to amd C's to add Railroad D's W/Attach; Not of HRG W/COS.

IN THE CIRCUIT COURT OF KANAWHA COUNTY,
WEST VIRGINIA

Case No. 92-C-19-8888

IN RE: ASBESTOS III,

RELEVANT DOCKET ENTRIES

DATE	PROCEEDINGS
4/10/1998	Memo of Law in Supp of Mot W/EXH's.
4/29/1998	Verdict Form of James Spangler; Verdict Form of Vance; Verdict Form of Ayers; Verdict Form of Shirley; Verdict Form of Johnson; Verdict Form of Butler.
1/06/1999	<O:MAC.
1/06/1999	<O: JDGMT O/MAC (S93-C-7004).
1/06/1999	<O: JDGMT O/MAC (92-C-8970).
1/06/1999	<O: JDGMT O/MAC (92-C-8888).
1/06/1999	<O: JDGMT O/MAC (93-C-6857).
1/06/1999	<O: JDGMT O/MAC (93-C-6876).
1/19/1999	D, Norfolk & Western Railway Co's Mot for Judg or For New Trial (92-C-5829, 93-C-6857, 93-C-6876, 93-C-7004, 92-C-8899, 92-C-8970).
1/19/1999	COS as to D. Norfolk & Western Railway Co's Mot for Judg or For New Trial & Not of HRG (93-C-6857)
1/19/1999	Not of HRG (93-C-6857).

DATE	PROCEEDINGS
2/22/2001	<O: Grting Norfolk Souther Railway Comp Mot to Vacate Entry of O Denying Mot for New Trial/MacMac (S2/12/01).
3/12/2001	Pet WVSCA; Desig; Cos; Docking Stmt; (92-C-5829; 93-C-7004; 93-C-6857; 92-C-8888; 92-C-8970; 93-C-6876) By Fred Adkins
3/12/2001	By Ck $150.00; RCT#319189
10/19/2001	* O Fr SCA Refusing Pet for Ap (92-C-5829).

IN THE CIRCUIT COURT OF KANAWHA COUNTY, WEST VIRGINIA

[Filed Oct. 15, 1992]

1. Delbert R. Adkins and Rosella Adkins, his wife — Civil Action No. 92-C-7698
2. Jeff Adkins, Jr. and Loretta Adkins, his wife — Civil Action No. 92-C-7699
3. Richard Curtis Akers and Ruby Akers, his wife — Civil Action No. 92-C-7700
4. Gene Thurman Archey and Norma Lee Archey, his wife — Civil Action No. 92-C-7701
5. Lester Kenneth Arnett and Glenoka M. Arnett, his wife — Civil Action No. 92-C-7702
6. James Harry Arthur and Betty June Arthur, his wife — Civil Action No. 92-C-7703
7. Burton Bailey Atkins and Glenna S. Atkins, his wife — Civil Action No. 92-C-7704
8. James Roy Ball and Ruby Ball, his wife — Civil Action No. 92-C-7705
9. Joel Dee Baisden and Brookie Baisden, his wife — Civil Action No. 92-C-7706
10. Everett E. Ballard, Sr. and Donna J. Ballard, his wife — Civil Action No. 92-C-7707
11. Arthur L. Barker and Peggy J. Barker, his wife — Civil Action No. 92-C-7708
12. Clyde Bates — Civil Action No. 92-C-7709
13. Paul J. Bellomy and Marilyn P. Bellomy, his wife — Civil Action No. 92-C-7710
14. Bernard Blake and Sarah F. Blake, his wife — Civil Action No. 92-C-7711
15. Grant Blevins — Civil Action No. 92-C-7712
16. Randall L. Blevins and Katheryn Blevins, his wife — Civil Action No. 92-C-7713
17. Carlos Elmo Blum and Margaret Blum, his wife — Civil Action No. 92-C-7714
18. Harold Ray Boggs and Betty Boggs, his wife — Civil Action No. 92-C-7715

19. Charles Bowen, Jr. and Pauline Bowen, his wife — Civil Action No. 92-C-7716
20. Colombus Bowen, Jr. and Mable Bowen, his wife — Civil Action No. 92-C-7717
21. Sterling Bowen and Violet Bowen, his wife — Civil Action No. 92-C-7718
22. Bobby J. Bowen and Barbara Bowen, his wife — Civil Action No. 92-C-7719
23. Jack Glen Bowling and Mildred L, Bowling, his wife — Civil Action No. 92-C-7720
24. Willard T. Bradberry and Mary Bradberry, his wife — Civil Action No. 92-C-7721
25. Leon E. Bradshaw and [illegible]ry Bradshaw, his wife — Civil Action No. 92-C-7722
26. James E. Bretz and Orpha May Bretz, his wife — Civil Action No. 92-C-7723
27. Lovin Stout Brooks and Trula Brooks, his wife — Civil Action No. 92-C-7724
28. Charles E. Brown and Virginia R. Brown, his wife — Civil Action No. 92-C-7725
29. Raymond E. Burkhardt and Georgia Burkhardt, his wife — Civil Action No. 92-C-7726
30. Paul E. Campbell and Sheila Campbell, his wife — Civil Action No. 92-C-7727
31. Lewis B. Carico and Wanda Carico, his wife — Civil Action No. 92-C-7728
32. Jesse J. Cavanaugh and Lucille Cavanaugh, his wife — Civil Action No. 92-C-7729
33. Kathleen Chaney — Civil Action No. 92-C-7730
34. William I. Chapman and Betty J. Chapman, his wife — Civil Action No. 92-C-7731
35. Basil Curtis Coleman and Edith Coleman, his wife — Civil Action No. 92-C-7732
36. Douglas L. Combs and Phyllis Combs, his wife — Civil Action No..92-C-7733
37. Paul James Cooper — Civil Action No. 92-C-7734
38. Clyde E. Copley and Betty J. Copley, his wife — Civil Action No. 92-C-7735

39. Glen J. Corder and
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40. Earl Cox and
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41. Clyde E. Crouse and
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42. Clyde M. Damron and
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43. Paul H. Eastham and
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44. Ray Enyart and
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45. Henry E. Fankhouser — Civil Action No. 92-C-7742
46. Paul A. Freeman and
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47. Billie E. Gibson and
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48. Carl Ray Gibson and
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49. Clarence G. Godby and
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50. James E. Gray and
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51. Gene T. Grove and
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52. James Hagley — Civil Action No. 92-C-7749
53. Herbert E. Harris and
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54. Wilbur S. Hayes — Civil Action No. 92-C-7751
55. Shelby W. Hazel, Sr. and
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56. Wilkie L. Hensley and
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57. Ernest E. Higginbotham and
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58. Dana Holcomb (deceased) and
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59. Edward Honeycutt and
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60. Joe D. Howard and
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61. Clarence O. Hughes, Jr. and
Norma E. Hughes, his wife — Civil Action No. 92-C-7758
62. Frank E. Johnson and
Joyce E. Johnson, his wife — Civil Action No. 92-C-7759
63. Roscoe Johnson and
Bonnie Johnson, his wife — Civil Action No. 92-C-7760
64. Maurice L. Jones and
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65. Elmer J. Kazee and
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66. Robert E. Keeton and
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67. William R. Kegley and
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68. William A. Kelly — Civil Action No. 92-C-7765
69. John R. Kessler and
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70. Charles D. Kinder and
Shirley Kinder, his wife — Civil Action No. 92-C-7767
71. Darrell R. King and
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72. Hessie E. Lake and
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73. Charles L. Lambert and
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74. Albert B. Leadmon and
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75. Elmer W. Lengyel and
Anna H. Lengyel, his wife — Civil Action No. 92-C-7772
76. Wesley E. Lipford and
Margaret Lipford, his wife — Civil Action No. 92-C-7773
77. Charles E. Littleton and
Naomi Littleton, his wife — Civil Action No. 92-C-7774
78. Guy C. Lockhart, Sr. and
Freda Lockhart, his wife — Civil Action No. 92-C-7775

79. Bobby D. Logan and Jewell K. Logan, his wife — Civil Action No. 92-C-7776
80. Bob Carroll McCoy — Civil Action No. 92-C-7777
81. Ralph Mason McCroskey and Eva J. McCroskey, his wife — Civil Action No. 92-C-7778
82. James McDonald and Mae McDonald, his wife — Civil Action No. 92-C-7779
83. Earsel Marcum and Irene Marcum, his wife — Civil Action No. 92-C-7780
84. Homer B. Martin and Margaret Martin, his wife — Civil Action No. 92-C-7781
85. Robert K. Martin and Rebecca Martin, his wife — Civil Action No. 92-C-7782
86. Glen E. Mathews and Marilyn Mathews, his wife — Civil Action No. 92-C-7783
87. Alfred C. Mayle — Civil Action No. 92-C-7784
88. William M. Menefree and Dorothy Menefree, his wife — Civil Action No. 92-C-7785
89. Robert L. Messer and Eula M. Messer, his wife — Civil Action No. 92-C-7786
90. Charles R. Miller and Nola A. Miller, his wife — Civil Action No. 92-C-7787
91. Martin M. Moody — Civil Action No. 92-C-7788
92. Ronald J. Morrison and Linda L. Morrison, his wife — Civil Action No. 92-C-7789
93. John M. Mullins, Jr. and Donna Mullins, his wife — Civil Action No. 92-C-7790
94. Ona T. Mullins and Audrey A. Mullins, his wife — Civil Action No. 92-C-7791
95. Standard V. Mullins and Mary F. Mullins, his wife — Civil Action No. 92-C-7792
96. Paul R. Payne and Barbara S. Payne. his wife — Civil Action No. 92-C-7793
97. Henry Payne — Civil Action No. 92-C-7794
98. Stanley E. Pennington and Phyllis Pennington, his wife — Civil Action No. 92-C-7795
99. Shelby Peters and Opal Peters, his wife — Civil Action No. 92-C-7796

100. A.G. Pettrey, Jr. and Margaret Pettrey, his wife — Civil Action No. 92-C-7797
101. James Pilney and Sophie Pilney, his wife — Civil Action No. 92-C-7798
102. Robert L. Porter and Lorene Porter, his wife — Civil Action No 92-C-7799
103. George Franklin Rice and Rosalee Rice, his wife — Civil Action No. 92-C-7800
104. Kenneth W. Richmond and Lois Richmond, his wife — Civil Action No. 92-C-7801
105. Gerald E. Roark and Ellouise Roark, his wife — Civil Action No. 92-C-7802
106. Mitchell Roark and Virgie M. Roark, his wife — Civil Action No. 92-C-7803
107. Charles E. Rogers — Civil Action No. 92-C-7804
108. Dan L. Rowsey and Norma Rowsey, his wife — Civil Action No. 92-C-7805
109. Stanley Royster and Helen Royster, his wife — Civil Action No. 92-C-7806
110. Joe S. Saunders and Mosby A. Saunders, his wife — Civil Action No. 92-C-7807
111. Paul D. Searls and Rita S. Searls, his wife — Civil Action No. 92-C-7808
112. James M. Siple and Betty Jo Siple, his wife — Civil Action No. 92-C-7809
113. Arlie M. Sparks — Civil Action No. 92-C-7810
114. Carl Stevens and Vetta Stevens, his wife — Civil Action No. 92-C-7811
115. Eugene Stowers and June Stowers, his wife — Civil Action No. 92-C-7812
116. Clarence Stratton and Freda Stratton, his wife — Civil Action No. 92-C-7813
117. Loren G. Stratton and Lola M. Stratton, his wife — Civil Action No 92-C-7814
118. George P. Tardy and Marhla Tardy, his wife — Civil Action No. 92-C-7815
119. Charles Thompson and Lillie Thompson, his wife — Civil Action No. 92-C-7816

120. Charles R. Thompson and Edra Thompson, his wife	Civil Action No. 92-C-7817
121. Manley A. Thompson	Civil Action No. 92-C-7818
122. Carl E. Toney and Pearlie Toney, his wife	Civil Action No. 92-C-7819
123. Clifford A. Vance and Evelyn Vance, his wife	Civil Action No. 92-C-7820
124. Beechie M. Ward	Civil Action No. 92-C-7821
125. Ronald L. Ward	Civil Action No. 92-C-7822
126. Larry O. Webb and Sandra Webb, his wife	Civil Action No. 92-C-7823
127. Gene Wells and Phyllis Wells, his wife	Civil Action No. 92-C-7824
128. Ira E. Wells, Jr. and Sara Wells, his wife	Civil Action No. 92-C-7825
129. Herman C. Whitney	Civil Action No. 92-C-7826
130. Cliffors L. Williams and Hazel Williams, his wife	Civil Action No. 92-C-7827
131. Cledith A. Wilson	Civil Action No. 92-C-7828
132. Edsel F. Yates and Ruth M. Yates, his wife	Civil Action No. 92-C-7829

Plaintiffs,

v.

CONSOLIDATED RAIL CORPORATION (CONRAIL)
Penn Central Corporation (PCC)
As successor to Penn Central Company,
Penn Central Railroad and
Central Railroad of New York
A Pennsylvania Corporation
Serve: CT Corporation
1600 Charleston Nat'l Plaza
Charleston, WV 25301

CSX TRANSPORTATION
INCORPORATION, INC.
Individually and as successor
to the Chesapeake & Ohio
Railroad Company,
A Virginia Corporation
Serve: A.F. Bobersky
Chafin Bldg, 517 9th Street
Huntington, WV 25701

NORFOLK SOUTHERN RAILWAY CO.
Individually as successor to
Southern Railway Company
and the Virginian Railroad,
A Virginia Corporation
Serve: President/CEO
3 Commercial Place
Norfolk, VA 23510-2108

NORFOLK SOUTHERN CORPORATION
Individually and as successor
to the Virginian Railroad,
A Virginian Corporation
Serve: President/CEO
3 Commercial Place
Norfolk, VA 23510-2108

NORFOLK AND WESTERN RAILWAY CO.
Individually and as successor
to the Norfolk Southern
Railway Company,
A Virginia Corporation
Serve: Richard A. Keeney
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Roanoke, VA 24042

OWENS CORNING FIBERGLAS CORP.
Serve: President/CEO
National Bank Building
Toledo, OH 43604

A&I COMPANY
Serve: C.P. Guthrie
5020 Kanawha Turnpike
Box 9277
Charleston, WV 25309

ABEX CORPORATION
Serve: President/CEO
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Burr Ridge, IL 60521

ANCHOR PACKING COMPANY
Serve: CT Corporation Systems
2 Peachtree Street
Atlanta, GA 30383

A.P. GREEN INDUSTRIES, INC.
Serve: Corporate Trust Company
1209 Orange Street
Wilmington, DE 19801

ARMSTRONG WORLD INDUSTRIES, INC.
Serve: W.M. Woodroe
Charleston National Plaza
Charleston, WV 25301

CERTAINTEED CORPORATION.
Serve: President/CEO
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Valley Forge, PA 19482

DURAMETALLIC CORPORATION
Serve: C.T. Corporation Systems
P. O. Box 951
Charleston, WV 25323

FIBREBOARD CORPORATION
Serve: President/CEO
1000 Burnett Avenue
Suite 410
Concord, CA 94520

FLEXITALLIC, INC.
Serve: President/CEO
P. O. Box 848
Bellmar, NJ 08031

THE FLINTKOTE COMPANY
Serve: President/CEO
c/o Mossman, Guther,
Knox and Elliott
50 California Street
34th Floor
San Francisco, CA 94111

GAF CORPORATION
Serve: Prentice Hall Corporation
32 Lockerman Square, East
Suite L-100
Dover, DE 19901

GARLOCK, INC.
Serve: President/CEO
1666 Division Street
Palmyra, NY 14522

GEORGIA-PACIFIC CORPORATION
Serve: C.T. Corporation Systems
P. O. Box 951
Charleston, WV 25323

GENERAL ELECTRIC COMPANY
Serve: President/CEO
3135 Easton Turnpike
Fairfield, CONN 06431

INSUL COMPANY INCORPORATED
Serve: President/CEO
110 N. Market Street
East Palestine, OH 44413-2095

J.A. JONES CONSTRUCTION COMPANY
Serve: President/CEO
6060 St. Albans Street
One South Executive Park
Charlotte, NC 28287

KEENE CORPORATION
Serve: President/CEO
200 Park Avenue
New York, NY 10166

METROPOLITAN LIFE INSURANCE COMPANY
Serve: President/CEO
1 Madison Avenue
New York, NY, 10010

M.H. DETRICK COMPANY
Serve: President/CEO
19444 S. 97th Avenue
Box 270
Makena, IL 60448

NATIONAL GYPSUM COMPANY
Serve: President/CEO
325 Delaware Avenue
Buffalo, NY 14202

PITTSBURGH CORNING CORPORATION
Serve: President/CEO
800 Presque Isle Drive
Pittsburgh, PA 15239

PPG INDUSTRIES, INC.
Serve: President/CEO
One PPG Place
Pittsburgh, PA 15272

QUIGLEY COMPANY, INC.
Serve: C.T. Corporation Systems
P. O. Box 951
Charleston, WV 25323

QUIN-T CORPORATION
Serve: CENTER FOR CLAIMS RESOLUTION
500 College Road East
Princeton, NJ 54840

ROCKWOOL MANUFACTURING CORPORATION
Serve: President/CEO
500 Thornton Avenue
Leeds, AL 35094

TURNER & NEWELL, PLC
Serve: President/CEO
Bowden House
Ashburton Road West
Trafford Park
Manchester M17 1RA
England

UNION BOILER
Serve: David K. Baxter
P.O. Box 1425
Nitro, WV 21543

UNITED STATES GYPSUM COMPANY
Serve: President/CEO
101 S. Wacker Drive
Chicago, IL 60606

WESTINGHOUSE ELECTRIC CORPORATION
Serve: President/CEO
Six Gateway Center
Pittsburgh, PA 15222

W.R. GRACE COMPANY—CONN.
Serve: C.T. Corporation Systems
P. O. Box 951
Charleston, WV 25323
Defendants.

ORIGINAL COMPLAINT AND JURY DEMAND

The plaintiffs, by their undersigned counsel, hereby bring suit against the defendants and for causes of action allege as follows:

(JURISDICTION AND VENUE)

1. The plaintiffs named herein are residents and citizens of the State of West Virginia, Kentucky and Ohio and were exposed to asbestos and other harmful dusts in West Virginia, Kentucky and Ohio.

2. The defendants herein are corporations some of which are West Virginia corporations and some of which are Ohio corporations.

3. All of the defendants are either licensed and registered to do business in the State of West Virginia or have done business in the state by putting their products into the stream of commerce in the State of West Virginia.

4. All of the plaintiffs' claims exceed the jurisdictional minimum for this court.

5. Based upon the above, jurisdiction and venue is proper in this case.

COUNT I

(FELA—Railroad Defendants Only)

6. This is an action for asbestos related personal injuries arising under the provisions of the Federal Employer's Liability Act, 45 U.S.C. Section 51, et seq., specifically including the Federal Safety Appliance Act, 45 U.S.C. Sections 1 through 16, The Locomotive Boiler Inspection Act, 45 U.S.C. Sections 22 through 34 and common law negligence principles.

7. This Court has jurisdiction over this case under 45 U.S.C. Section 51 et seq. and 28 U.S.C. Section 1445 (non-removable actions).

8. The Plaintiffs were all employees of the railroad and contracted occupational diseases within the scope of that employment.

9. The amount in controversy, exclusive of interest and costs, exceeds the jurisdictional amount of this Court and this Court has jurisdiction and venue hereof.

10. CSX Transportation, Inc. is a successor to the Chesapeake & Ohio Railroad Company and is a Virginia corporation. Hereinafter, this defendant is referred to as "the railroad".

11. Norfolk and Western Railway Company is a Virginia corporation and is a wholly owned subsidiary of Norfolk Southern Railway Company. Hereinafter, this defendant is referred to as "N&W". All of the allegations contained in Count I attributable to "the railroad" are likewise attributable to this defendant.

12. During his employment with the railroad, each Plaintiff was exposed to asbestos and asbestos-containing products on a repeated basis as well as other harmful dusts. Plaintiff was required by the railroad to work with and near toxic asbestos and asbestos-containing products and other harmful dusts.

13. The Plaintiffs were unaware of the toxic propensities of the asbestos and asbestos-containing products and other harmful dusts to which they were exposed.

14. As a direct and proximate result of their exposure to asbestos and asbestos-containing products and other harmful dusts, without any lack of due care on their part, each Plaintiff contracted asbestosis and other dust diseases related to such exposure.

15. The Plaintiffs were unaware of the cause of their latent and deteriorating medical condition until diagnosed as suffering from same within the last two (2) years.

16. The railroad owed each Plaintiff a duty to have him, work in a safe employment environment under the Federal Employer's Liability Act.

17. The railroad, by and through its duly authorized agents, breached this duty to each plaintiff by:

(a) Failing to provide Plaintiff with a reasonably safe work place;

(b) Failing to furnish Plaintiff with safe and suitable tools and equipment including adequate protective masks and protective inhalation devices;

(c) Failing to warn Plaintiff of the true nature and hazardous effects of asbestos and asbestos-containing products;

(d) Failing to operate a locomotive repair facility in a reasonably safe manner;

(e) Failing to provide instructions or a method for the safe use of asbestos;

(f) Failing to provide adequate, if any, instructions in the use or removal of old asbestos products;

(g) Failing to test asbestos-containing products prior to requiring employees to work with the same, to determine their ultra-hazardous nature;

(h) Formulating and using a method of handling asbestos and asbestos-containing products which exposed Plaintiff to high concentrations of asbestos fibers;

(i) Failing to provide Plaintiff with safe and proper ventilation systems in the railroad facilities;

(j) Allowing unsafe practices to become standard practice;

(k) Failing to exercise reasonable care in publishing and enforcing a safety plan and method of handling and installing asbestos and asbestos-containing products;

(l) Failing to inquire of the suppliers of asbestos and asbestos-containing products, the nature of asbestos;

(m) Requiring Plaintiff to work with ultra-hazardous asbestos and asbestos-containing products;

(n) Failing to exercise adequate, if any, care for the health and safety of Plaintiff;

(o) Failing to periodically test and examine Plaintiff to determine if he was subject to any ill effects of his exposure to asbestos and asbestos-containing products; and

(p) Failing to periodically inspect its locomotives, boilers and their appurtenances in order to ascertain any contamination by asbestos fibers.

18. As a direct and proximate result of the breach of duty by the railroad, each Plaintiff was exposed to toxic asbestos and asbestos-containing products and other harmful dusts.

19. As a direct and proximate result of the negligence of the railroad, each Plaintiff has suffered personal injury, great pain, extreme anxiety, and he truly believes his injuries and disability are permanent; his earning capacity has been greatly reduced; his enjoyment of life has been greatly diminished; and his expected life span has been greatly shortened.

20. As a direct and proximate result of the negligence of the railroad, each Plaintiff, because of health problems caused by this negligence, has been forced to incur medical expenses for doctors, hospitals, drugs and health care services, and he truly believes that he will be forced to incur additional expenses in the future in an effort to treat his condition.

21. Each Plaintiff was a strong, able-bodied workman capable of gainful employment at the time of the manifestation of his illness. As a result of his illness, each Plaintiff has suffered damages by way of lost wages and a diminished ability to render services, society, affection, counseling and support to his household.

WHEREFORE, each Plaintiff claims compensatory damages in the amount deemed sufficient by the jury with interest and costs of suit herein.

COUNT II

(Negligence)

22. Over the course of their working years, the first named plaintiffs (hereinafter "the plaintiffs") worked with and/or around products containing asbestos and/or other harmful minerals manufactured, supplied, sold, distributed and installed by the defendants. As a result, the plaintiffs breathed asbestos and other harmful dusts created by the use of said products, and developed serious, permanent and disabling lung diseases.

23. The defendants and each of them by their agents, servants and employees were negligent in that they knew or

should have known that the use of their products would cause serious lung diseases and cancer, and knowing same, did fail to take reasonable precautions to warn the plaintiffs of the dangers to which they were exposed, did fail to inform the plaintiffs of what would be safe and sufficient wearing apparel and safety equipment for persons who were exposed to their products, did fail to inform the plaintiffs of what would be safe and proper methods of handling and using the products, did fail to remove the products from the market when they knew or should have known of the hazards associated with the use of the products, did fail to properly and adequately label the products, did sell the products which were not in a reasonably safe condition, did fail to supply accurate and complete warnings of the known dangers involved in the use of and exposure to the products, did fail to use safe, substitute products when such were available, did negligently install the products without taking precautions to warn and protect the plaintiffs.

24. Such actions and failure to act on the part of each defendant constituted malicious, willful and wanton misconduct with complete disregard for the safety and rights of others, amounting to extraordinary and outrageous conduct especially when the defendants were aware of scientific and medical data made available to them that their products were harmful and deadly to workers who were exposed to them.

25. As a direct and proximate result of the negligence of the defendants which caused them to develop serious, permanent and disabling lung diseases, each plaintiff has suffered damages including but not limited to medical expenses, great pain of body and mind, embarrassment, inconvenience, loss of wages and wage earning capacity, loss of the quality and enjoyment of their lives, shortening of their life expectancy, increased risk of cancer and mesothelioma with the worry and concern that naturally flows from such increased risk, permanent and disabling injury, all of which will continue into the future.

WHEREFORE, each plaintiff individually demands judgment against the defendants, jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT III—STRICT LIABILITY

26. The plaintiffs incorporate by reference as if fully set forth herein the allegations contained in paragraphs 1-25 above.

27. At the time the defendants placed their products on the market, such products contained defects which created an unreasonable risk of harm to those likely to use or be exposed to the product, to wit; (a) exposure to the product caused cancer and lung diseases, (b) no warning or an inadequate warning was given to users or persons exposed to the product.

28. At the time of plaintiffs exposure, the products were being used for the purposes for which they were intended, the products were in substantially the same condition as when they left the control of each of the defendants and the plaintiffs had no knowledge of the defects and no reason to suspect a defective condition.

29. As a sole, direct and proximate result of the defective products manufactured, supplied and sold by the defendants, the plaintiffs developed severe, permanent and disabling lung diseases and suffered the damages and losses enumerated in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendants, jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT IV—CONSPIRACY

30. The plaintiffs were employed in capacities which placed them in close proximity with asbestos and asbestos-related materials, manufactured and/or distributed by one or more of the defendants. Plaintiffs' presence was known or should have been known to the defendants and each of them.

31. The plaintiffs were exposed to the asbestos products manufactured by one or more of the defendants named in paragraph 16 below. The exposure to the asbestos or asbestos-related products manufactured by the defendants proximately contributed to the disease suffered by plaintiffs as described below.

32. The defendants as specifically identified below, individually and as agents of one another and as co-conspirators, agreed and conspired among themselves and with other asbestos manufacturers and distributors to injure the plaintiff in the following fashion:

(a) Beginning in approximately 1934, conspirator Johns-Manville Corporation, through its agents, Vandiver Brown and attorneys J.C. Hobart, and conspirator Raybestos-Manhattan, through its agents, Sumner Simpson and J. Rohrbach, suggested, to Dr. Anthony Lanza, Associate Director, Metropolitan Life Insurance Company (insurers of Manville and Raybestos), that Lanza publish a study on asbestosis in which Lanza would affirmatively misrepresent a material fact about asbestos exposure; that is the seriousness of the disease process, asbestosis. This was accomplished through intentional deletion of Lanza's description of asbestosis as "fatal" and through other selective editing that affirmatively misrepresented asbestos [sic] as a disease process less serious than it actually is and was known to be then. As a result, Lanza's study was published in the medical literature in this misleading fashion in 1935. The conspirators were motivated, in part, to effectuate this fraudulent

misrepresentation and fraudulent nondisclosure by the desire to influence proposed legislation to regulate asbestos exposure and to provide a defense in lawsuits involving Manville, Raybestos and Metropolitan Life, as insurer.

(b) In 1936, conspirators American Brake Block Corporation, Asbestos Manufacturing Company, Gatke Corporation, Johns-Manville Corporation, Keasby & Mattison Company (then an alter-ego to conspirator Turner & Newall), Raybestos-Manhattan, Russell Manufacturing (whose liabilities have been assumed by H.K. Porter Company), Union Asbestos and Rubber Company and United States Gypsum Company, entered into an agreement with the Saranac Laboratories. Under this agreement, these conspirators acquired the power to decide what information Saranac Laboratories could publish about asbestos disease and could also control in what form such publications were to occur. This agreement gave these conspirators power to affirmatively misrepresent the results of the work at Saranac, and also gave these conspirators power to suppress material facts included in any study. On numerous occasions thereafter, the conspirators exercised their power to prevent Saranac scientists from disclosing material scientific data, resulting in numerous misstatements of fact being made at scientific meetings.

(c) On November 11, 1948, representatives of the following conspirators met at the headquarters of Johns-Manville Corporation: American Brake Block Division of American Brake and Shoe Foundry, Gatke Corporation, Keasby & Mattison Company (then an alter-ego to conspirator Turner & Newall), Raybestos-Manhattan, Inc., Thermoid Company (whose assets and liabilities were later purchased by H.K. Porter Company), Union Asbestos and Rubber Company and United States Gypsum Company. U.S. Gypsum did not send a representative to the meeting, but

instead authorized Vandiver Brown of Johns-Manville to represent its interest at the meeting and to take action on its behalf.

(d) At this November 11, 1948 meeting, these defendants and their representatives decided to exert their influence to materially alter and misrepresent material facts about the substance of research started by Dr. Leroy Gardner at the Saranac Laboratories beginning in 1936. Dr. Gardner's research involved the carcinogenicity of asbestos in mice and also included an evaluation of the health effects of asbestos on humans with a critical review of the then-existing standards of dust exposure for asbestos and asbestos products.

(e) At this meeting, these defendants intentionally and affirmatively determined that Dr. Gardner's work should be edited to specifically delete material facts about the cancer-causing propensity of asbestos and the health effects of asbestos on humans and the critique of the dust standards and then published same in the medical literature as edited by Dr. Vorwald. These defendants thereby fraudulently misrepresented the risks of asbestos exposure to the public, in general, and the class of persons exposed to asbestos, including the plaintiffs.

(f) As a direct result of influence exerted by the above-described conspirators, Dr. Vorwald published Dr. Gardner's edited work in the *Journal of Industrial Hygiene, AMA Archives of Industrial Hygiene and Occupational Health* in 1951 in a form that stressed those portions of Dr. Gardner's work that the conspirators wished stressed, but which omitted references to human asbestosis and cancer, thereby fraudulently and affirmatively misrepresenting the extent of the risks. The conspirators affirmatively and deliberately disseminated this misleading Vorwald publication to university libraries, government officials, agencies and others.

(g) Such action constited [sic] a material affirmative misrepresentation of the total context of material facts involved in Dr. Gardner's work and resulted in creating an appearance that inhalation of asbestos was less of a health problem than Dr. Gardner's unedited work indicated.

(h) The following conspirators were members of the trade association known as Quebec Asbestos Mining Association (Q.A.M.A.): Johns-Manville Corporation, Carey-Canada, individually and as successor to Quebec Asbestos Corporation, the Celotex Corporation, successor to Quebec Asbestos Corporation, National Gypsum Company, and Turner & Newall, individually and successor to Bell Asbestos. These conspirators, members of Q.A.M.A., participated in the above-described misrepresentation of the work of Dr. Leroy Gardner published by Arthur Vorwald in the *AMA Archives of Industrial Health* in 1951. Evidence of the Q.A.M.A.'s involvement in this misrepresentation arises from co-conspirator Johns-Manville's membership of the Q.A.M.A., as well as correspondence from co-conspirators dated 10/29/47, 11/26/47, 3/6/38, 10/15/48, 3/8/49 and 9/6/50, and all indicating close monitoring of the editing process of Q.A.M.A.'s representative, Ivan Sabourin, acting on behalf of all Q.A.M.A. members.

(i) Defendants who were members of the Q.A.M.A. as described above, began on or about 1950 to formulate a plan to influence public opinion about the relationship between asbestos and cancer by influencing the medical literature on this subject and then touting and disseminating this literature to the public and to organizations and legislative bodies responsible for regulatory control of asbestos with the specific intent of misrepresenting the existing scientific information and suppressing contrary scientific data in their possession and control.

(j) This plan of misrepresentation and influence over the medical literature began on or about 1950 when the

aforementioned Q.A.M.A. members selected Saranac Laboratories to do an evaluation of whether cancer was related to asbestos. After a preliminary report authored by Arthur Vorwald in 1952 indicated that a cancer/asbestos relationship might exist in experimental animals, these Q.A.M.A. members refused to further fund the study and it was terminated and never publicly discussed.

(k) As a result of the termination of this study, these defendants fraudulently withheld information from the public and affirmatively misrepresented to the public and responsible legislative and regulatory bodies that asbestos did not cause cancer, including affirmative misrepresentations by conspirators' agents K.W. Smith, M.D., Paul Cartier, M.D., A.J. Vorwald, M.D., A. J. Lanza, M.D., Vandiver Brown and Ivan Sabourin, said misrepresentations being directed to *inter alia*, U.S. Government officials, Canadian government officials, U.S. National Cancer Institute, other medical organizations and the general public, including plaintiffs.

(l) Subsequently, the Q.A.M.A. defendant conspirators contracted with the Industrial Hygiene Foundation and Dr. Daniel Braun to further study the relationship between asbestos exposure, asbestosis and lung cancer. In 1957, Drs. Brown and Truan reported to the Q.A.M.A. that asbestosis did increase a worker's chances of incurring lung cancer.

(m) The Q.A.M.A. defendant conspirators/members thereafter caused, in 1958, a publication of the work by Braun and Truan in which the findings regarding increased incidence of cancer in persons with asbestosis was edited out by agents of the Q.A.M.A. The published version of this study contained a conclusion that asbestos exposure, alone, did not increase the incidence of lung cancer, a conclusion known by the defendant conspirators to be patently false.

(n) By falsifying and causing publication of studies concluding that asbestos exposure did not cause lung cancer and simultaneously omitting a documented finding that

asbestosis did increase the risk of lung cancer, these Q.A.M.A. defendant conspirators affirmatively misrepresented to the public and concealed from the public the extent of risks associated with inhalation of asbestos fibers.

(o) In approximately 1958, these Q.A.M.A. defendant conspirators publicized the edited works of Drs. Braun and Truan at a symposium in an effort to fraudulently misrepresent to the public and persons exposed to asbestos that the inhalation of asbestos dust would not cause cancer.

(p) The fraudulent misrepresentations beginning in 1946 as elaborated above and continuing with the publication of the 1958 Braun/Truan study influenced the standards set for threshold limit values for development of such standards to fail to lower the threshold limit value because of a cancer risk associated with asbestos inhalation.

(q) In 1967, Q.A.M.A. conspirators determined at their trade association meeting that they would intentionally mislead consumers about the extent of risks involved in inhalation of asbestos products.

(r) In 1952, a Symposium regarding the health effects of asbestos was held at the Saranac Laboratories. The following conspirators were in attendance: Johns-Manville, Turner & Newall, Raybestos-Manhattan, and Q.A.M.A. members by way of their agents, Cartier, Sabourin and LaChance.

(s) At this meeting, the occurrence of lung cancer and asbestosis in product users was discussed and the carcinogenic properties of all fiber types of asbestos was also discussed. In an affirmative attempt to mislead the public about the extent of health risks associated with asbestos, and in an effort to fraudulently conceal those risks from the public, these defendants conspired to prevent publication of the record of this 1952 Saranac Symposium and it was not published. In addition, the conspirators induced Vorwald not to announce the results of his and Gardner's animal studies

showing excess cancers in animals which thereby fraudulently misrepresented existing secret data which could not be publicized owing to the secrecy provisions contained in the 1936 Saranac agreement heretofore described.

(t) The following conspirators were members of the trade organization known as the Asbestos Textile Institute (ATI): Raybestos-Manhattan, Johns-Manville, H.K. Porter, Keasby & Mattison, individually and through its alter-ego Turner & Newall and National Gypsum.

(u) In 1947, these conspirators, members of the ATI, received a report from W.C.L. Hemeon regarding asbestosis, which suggested re-evaluation of the then-existing threshold limit values for asbestos exposure. These defendants caused this report not to be published and thereby fraudulently concealed material facts about asbestos exposure from the public and affirmatively misrepresented to the public and class of persons exposed to asbestos that the existing threshold limit value was acceptable. Thereafter, these defendant conspirators withheld additional material information on the dust standards from The American Conference of Governmental Industrial Hygienists (ACGIH), thereby further influencing evaluations of threshold limit values for asbestos exposure.

(v) In 1953, conspirator National Gypsum, through its agents, in response to an inquiry from the Indiana Division of Industrial Hygiene regarding health hazards of asbestos spray products, refused to mail a proposed response to that division indicating that respirators should be worn by applicators of the products. National Gypsum's response distorted and fraudulently misrepresented the need for applicators of asbestos spray products to wear respirators and fraudulently concealed from such applicators the need for respirators.

(w) In 1955, conspirator Johns-Manville, through its agent Kenneth Smith, caused to be published in the *AMA Archives of Industrial Health*, an article entitled "Pul-

monary Disability in Asbestos Workers." This published study materially altered the results of an earlier study in 1949 concerning the same set of workers. This alteration of Dr. Smith's study constituted a fraudulent and material misrepresentation about the extent of the risk associated with asbestos inhalation.

(x) In 1955, the National Cancer Institute held a meeting at which conspirator Johns-Manville, individually and as an agent for other alleged co-conspirators and A. Vorwald, as agent of co-conspirators, affirmatively misrepresented that there were no existing animal studies concerning the relationship between asbestos exposure and cancer, when, in fact, the conspirators were in secret possession of several studies which demonstrated that positive evidence did exist.

(y) In 1957, these conspirators, members of the ATI, jointly rejected a propose [sic] research study on cancer and asbestos and this resulted in fraudulently concealed from the public material facts regarding asbestos exposure and also constituted an affirmative misrepresentation of the then-existing knowledge about asbestos exposure and lung cancer.

(z) In 1964, conspirators who were members of the ATI met to formulate a plan for rebutting the association between lung cancer and asbestos exposure that had been recently discussed by Dr. Irving J. Selikoff. Thereafter, these members of the ATI embarked upon a campaign to further misrepresent the association between asbestos exposure and lung cancer.

(aa) All conspirators identified above approved and ratified and furthered the previous conspiratorial acts of conspirators Johns-Manville, Raybestos Manhattan and A.J. Lanza, acting on behalf of Metropolitan Life Insurance company, and all alleged co-conspirators during the dates and circumstances alleged above, acted as agents and co-conspirators for the other conspirators.

33. The acts of the defendant conspirators as described above, constitute a fraudulent concealment and/or a fraudulent misrepresentation which proximately caused injury to the plaintiffs in the following manner:

(a) The material published or caused to be published by the defendants was false and incomplete in that the defendants knowingly and deliberately deleted references to the known health hazards of asbestos and asbestos-related products.

(b) Defendants individually, as members of a conspiracy, and as agents or other co-conspirators, intended that the publication of false and misleading reports and/or the nondisclosure of documented reports of the health hazards of asbestos:

(1) maintain a favorable atmosphere for the continued sale and distribution of asbestos and asbestos-related products;

(2) assist in the continued pecuniary gain of the defendants through the sale of their products;

(3) influence in the defendants' favor proposed legislation to regulate asbestos exposure and;

(4) to provide a defense in law suits brought for injury resulting from asbestos disease.

(c) Plaintiffs reasonably relied upon the published medical and scientific data documenting the purported safety of asbestos and asbestos-related products, and the absence of published medical and scientific reports on the hazards of asbestos and asbestos-related products to continue their exposure to asbestos because they believed it to be safe.

(d) Defendants individually, as members of a conspiracy, and as agents of other co-conspirators intended that plaintiffs rely upon the published reports regarding the safety of asbestos and asbestos-related products and upon the

absence of published medical and scientific data regarding the hazards of asbestos and asbestos-related products, to continue their exposure to those products.

(e) Defendants individually, as members of a conspiracy, and as agents of other co-conspirators are in a position of superior knowledge regarding the health hazards of asbestos and therefore plaintiffs had a right to rely on the published reports commissioned by the defendants regarding the health hazards of asbestos and the absence of published medical and scientific data regarding the hazards of asbestos and asbestos-related products.

(f) Plaintiffs suffered injury as a direct and proximate result of the acts alleged herein, and damages as described in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendants, jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT V—WRONGFUL DEATH

34. The plaintiffs incorporate by reference as if fully set forth herein the allegations contained in paragraphs 1 through 33 above.

35. Certain plaintiffs are representatives of the estates of deceased workers. In those cases, this action is brought pursuant to the Wrongful Death Statute since the decedent died as a direct and proximate result of exposure to asbestos and other harmful dusts caused by the wrongful acts and omissions and defective products of the defendants herein. The decedents at the time of death had beneficiaries and distributees as defined by the Wrongful Death Statute.

36. As a proximate result of the aforementioned wrongful acts and omissions of the defendants and exposure to the defendants' defective products, the decedents suffered prior to their death severe physical pain, mental anguish, worry, loss of enjoyment of life, loss of income and medical expenses. As a result of the decedents' death, funeral and burial expenses were incurred, there was a loss of future income and the decedents' beneficiaries and statutory distributees have suffered sorrow mental anguish, loss of society, loss of companionship, loss of comfort, loss of guidance and advice, loss of services, protection, care and assistance as well as a loss of the benefit of the decedents' income.

WHEREFORE, each plaintiff individually demands judgment against the defendants, jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT VI—LOSS OF CONSORTIUM

37. Plaintiffs incorporate by reference as if fully set forth herein the allegations contained in paragraphs 1 through 20 above. Plaintiffs' spouses have by reason of the lung diseases and disabilities suffered by the first named plaintiff have themselves suffered and will continue to suffer into the future the permanent loss of the consortium, guidance, kindly office, support and services of their spouses as well as damage to the marital relationship.

WHEREFORE, each plaintiffs' spouse individually demands judgment against the defendants, jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT VII (PPG ONLY)

(Negligence)

38. Defendant PPG Industries, Inc. (hereinafter "PPG") is the parent corporation of Pittsburgh-Corning Corporation, (hereinafter "subsidiary") a former manufacturer and marketer of asbestos-containing products.

39. Plaintiffs were exposed to the asbestos-containing products manufactured by the subsidiary.

40. At all times relevant herein, defendant PPG intervened on behalf of its subsidiary and researched the dangers and health consequences of asbestos exposure.

41. Defendant and its subsidiary shared a common medical director who conducted the research on the hazards of asbestos exposure.

42. Through this undertaking, defendant created a duty to those, like plaintiffs, who would come in contact with the asbestos contained in the products manufactured by its subsidiary.

43. Defendant, upon assuming this duty and responsibility, failed to perform with reasonable care.

44. Defendant PPG created a dangerous, harmful and potentially deadly situation by not sharing its data on the dangers of asbestos exposure with those reasonably likely to be exposed, such as plaintiffs.

45. Defendant breached its duty to plaintiffs by:

(a) failing to reasonably warn plaintiffs of the hazards of asbestos exposure;

(b) failing to act reasonably with regard to the information it possessed concerning the hazards of exposure to asbestos;

(c) failing to provide plaintiffs with the knowledge as to the possible precautions to protect against the harmful effects of asbestos exposure;

(d) failing to share its data on the dangers of asbestos exposure with those reasonably likely to be exposed, such as plaintiffs;

(e) concealing the information it possessed about the hazards of asbestos from those reasonably likely to be exposed, such as plaintiffs; and

(f) was otherwise negligent.

46. As a direct and proximate result of the negligence of defendant PPG Industries, Inc., plaintiffs developed severe, permanent and disabling lung diseases and suffered the damages and losses enumerated in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendant, PPG Industries, Inc., jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT VIII (PPG ONLY)

(Restatement of Torts Sec. 324A(a))

47. Plaintiffs repeat and reallege all allegations contained in paragraphs 38 to 46 above.

48. Defendant PPG undertook to render services for its subsidiary; to wit; research on the health effects of asbestos exposure.

49. Defendant PPG did or reasonably should have recognized this undertaking was necessary for the protection of third parties.

50. Defendant PPG breached this duty to third parties, such as the plaintiffs, by failing to exercise reasonable care to protect them from or warn them of the health hazards of asbestos exposure.

51. Defendant's failure to exercise reasonable care increased the risk of harm.

52. As a direct and proximate result of the negligence of defendant PPG Industries, Inc., plaintiffs developed severe, permanent and disabling lung diseases and suffered the damages and losses enumerated in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendant, PPG Industries, Inc., jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT IX (PPG ONLY)

(Restatement of Torts Sec. 324A(b))

53. Plaintiffs repeat and reallege all allegations contained in paragraphs 38 through 52 above.

54. Defendant PPG's subsidiary owed a duty to plaintiffs to reasonably research the health effects of asbestos exposure.

55. Defendant PPG undertook to perform this duty owed to plaintiffs.

56. Defendant PPG breached this duty it undertook to perform for its subsidiary by:

(a) failing to reasonably warn plaintiffs of the hazards of asbestos exposure;

(b) failing to act reasonably with regard to the information it possessed with regard to the hazards of exposure to asbestos;

(c) failing to provide plaintiffs with the knowledge as to the possible precautions to protect against the harmful effects of asbestos exposure;

(d) failing to share its data on the dangers of asbestos exposure with those reasonably likely to be exposed, such as plaintiffs;

(e) concealing the information it possessed about the hazards of asbestos from those reasonably likely to be exposed, such as plaintiffs; and

(f) was otherwise negligent.

57. As a direct and proximate result of the negligence of defendant PPG Industries, Inc., plaintiffs developed severe, permanent and disabling lung diseases and suffered the damages and losses enumerated in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendant, PPG Industries, Inc., jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT X (PPG ONLY)

(Restatement of Torts Sec. 324(c))

58. Plaintiffs repeat and reallege all allegations contained in paragraphs 38 through 57 above.

59. Plaintiffs relied to their detriment on the undertaking of defendant PPG to research and warn them of the health hazards of asbestos exposure.

60. As a direct and proximate result of the negligence of defendant PPG Industries, Inc., plaintiffs developed severe, permanent and disabling lung diseases and suffered the damages and losses enumerated in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendant, PPG Industries, Inc., jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT XI (PPG ONLY)

(Conspiracy)

61. Plaintiffs repeat and reallege all allegations contained in paragraphs 38 through 60 above.

62. Defendant PPG and its subsidiary, individually and in concert with each other and others, knowingly agreed and conspired among themselves to engage in a course of conduct that was reasonably likely to result in injury to the plaintiffs.

63. Defendant PPG knew or should have known that the failure of its subsidiary to warn plaintiffs of the harmful effects of asbestos exposure would cause plaintiffs injury.

64. Defendant PPG gave substantial assistance and/or encouragement to its subsidiary is [sic] accomplishing the injury to the plaintiffs.

65. As a direct and proximate result of the conspiracy between defendant PPG and its subsidiary, plaintiffs developed severe, permanent and disabling lung diseases and suffered the damages and losses enumerated in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendant, PPG Industries, Inc., jointly and severally, for compensatory damages in an amount deemed just and proper by the jury to adequately and fully compensate them for their damages and punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

COUNT XII (PPG ONLY)

(Punitive Damages)

66. Plaintiffs repeat and reallege all allegations contained in paragraphs 38 through 65 above.

67. The acts of defendant PPG were willful, wanton, malicious and in total disregard for the rights, health and safety of the plaintiff and others.

68. As a direct and proximate result of these acts, plaintiffs developed severe, permanent and disabling lung diseases and suffered the damages and losses enumerated in Count I above.

WHEREFORE, each plaintiff individually demands judgment against the defendant, PPG Industries, Inc., for punitive damages in an amount deemed just by the jury, with interest and costs of suit herein.

JURY DEMAND

The plaintiffs demand a trial by jury on all issues presented herein.

Plaintiffs
By Counsel

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Ness, Motley, Loadholt,
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IN THE CIRCUIT COURT OF KANAWHA COUNTY
WEST VIRGINIA

[Filed Feb. 3, 1995]

Frank Adams,	CIVIL ACTION NO. 93-C-3884
Thomas F. Adams,	CIVIL ACTION NO. 93-C-3886
Clarence Howard Anderson,	CIVIL ACTION NO. 92-C-7857
Freeman Ray Ayers,	CIVIL ACTION NO. 93-C-6857
James Michael Barlow,	CIVIL ACTION NO. 93-C-4891
Henry Ross Bartholow,	CIVIL ACTION NO. 93-C-4892
Benjamin Maywood Blecher,	CIVIL ACTION NO. 93-C-3913
George Garland Beloat,	CIVIL ACTION NO. 93-C-153
Nathan Donald Bennett,	CIVIL ACTION NO. 93-C-6159
Nolice Eugene Berry,	CIVIL ACTION NO. 92-C-4052
John Walker Berryman,	CIVIL ACTION NO. 93-C-3921
Doyle Thomas Bias,	CIVIL ACTION NO. 93-C-3925
Richard Mitchell Bland	CIVIL ACTION NO. 92-C-4055
Robert Everett Bledsoe,	CIVIL ACTION NO. 93-C-3943
Verrell Leon Bledsoe,	CIVIL ACTION NO. 93-C-3944
Henry Block,	CIVIL ACTION NO. 92-C-4057
Charles Frederick Bonner,	CIVIL ACTION NO. 93-C-4859
James Patrick Bowers,	CIVIL ACTION NO. 93-C-6863
Joe Bradac,	CIVIL ACTION NO. 93-C-6166
Melvin Minor Bragg, Sr.,	CIVIL ACTION NO. 93-C-6865
Billy Clay Brown,	CIVIL ACTION NO. 93-C-6871
Danny Joe Brown,	CIVIL ACTION NO. 93-C-3960
William Henry Brown,	CIVIL ACTION NO. 92-C-7954
Henry Maury Bryant,	CIVIL ACTION NO. 93-C-6874
Clarence Burmon Burgess,	CIVIL ACTION NO. 93-C-6875
Carl Richard Butler,	CIVIL ACTION NO. 93-C-6876
Lewis Edward Campbell,	CIVIL ACTION NO. 93-C-6172
Walter James Campbell,	CIVIL ACTION NO. 93-C-6878
Robert Gehrling Carey,	CIVIL ACITON NO. 93-C-4514
William Burdette Carroll,	CIVIL ACTION NO. 93-C-4906
Harvey Cornelius Carter,	CIVIL ACTION NO. 93-C-6176
James Edward Carter,	CIVIL ACTION NO. 92-C-5727
Rondel Lee Christian,	CIVIL ACTION NO. 93-C-6884
Jackie David Church, Sr.,	CIVIL ACTION NO. 92-C-8017

Ronald Clark,	CIVIL ACTION NO. 93-C-4908
Henry Coleman, Sr.,	CIVIL ACTION NO. 93-C-184
Orrin P. Collins,	CIVIL ACTION NO. 93-C-6889
Oppie Thurman Conley,	CIVIL ACTION NO. 92-C-4091
James Lewis Coss,	CIVIL ACTION NO. 93-C-4027
George Allen Cripple,	CIVIL ACTION NO. 93-C-6183
Clifford Damron,	CIVIL ACTION NO. 93-C-193
Jack Okey Dawson,	CIVIL ACTION NO. 93-C-6898
Robert DeTemple, Sr.,	CIVIL ACTION NO. 93-C-6899
Richard Curtis Decker, Sr.,	CIVIL ACTION NO. 93-C-4519
Charles Denver Dillon,	CIVIL ACTION NO. 93-C-6184
George Edward Dixon,	CIVIL ACTION NO. 92-C-8094
Melvin Arthur Dutcher,	CIVIL ACTION NO. 93-C-6186
Leslie Joe Edelman,	CIVIL ACTION NO. 93-C-4066
Billy Joe Edwards,	CIVIL ACTION NO. 93-C-6902
Robert Franklin Ellenberg,	CIVIL ACTION NO. 93-C-6190
Homer Mont Farley,	CIVIL ACTION NO. 93-C-6191
Harry Warren Ferguson,	CIVIL ACTION NO. 93-C-4077
James Delano Fernihough,	CIVIL ACTION NO. 92-C-4130
Burl Jackson Ferrell,	CIVIL ACTION NO. 93-C-6908
Charles Edward Fletcher,	CIVIL ACTION NO. 93-C-4083
George Forney,	CIVIL ACTION NO. 93-C-6911
Wayne Fortner, Jr.,	CIVIL ACTION NO. 92-C-8150
Garland Stewart Fowler,	CIVIL ACTION NO. 93-C-6912
Bobby Joe Frye,	CIVIL ACTION NO. 93-C-4090
Claude Cecil Gallion,	CIVIL ACTION NO. 93-C-4093
Grant Gilbert, Jr.,	CIVIL ACTION NO. 93-C-4100
Eldon Edward Gillium,	CIVIL ACTION NO. 93-C-6193
William Delford Gragg,	CIVIL ACTION NO. 93-C-6918
Lloyd Dale Gullett,	CIVIL ACTION NO. 92-C-8196
Lester Lee Haas,	CIVIL ACTION NO. 93-C-4122
Richard Arlen Haas,	CIVIL ACTION NO. 93-C-4123
Archie Grey Hall,	CIVIL ACTION NO. 93-C-4125
William Arthur Handley,	CIVIL ACTION NO. 93-C-6922
Woodrow Wilson Haney, Jr.,	CIVIL ACTION NO. 93-C-6923
Dewey Hardin,	CIVIL ACTION NO. 93-C-6924
Farnia Harold Harvey,	CIVIL ACTION NO. 93-C-6926
Clarence Heater,	CIVIL ACTION NO. 93-C-4941
Bottie Archie Holdren,	CIVIL ACTION NO. 93-C-6931

Ralph Veron Holesapple,	CIVIL ACTION NO. 93-C-6201
Herbert Holmes,	CIVIL ACTION NO. 93-C-4944
Carl Elwood Hood,	CIVIL ACTION NO. 93-C-4165
Burgess Horn,	CIVIL ACTION NO. 92-C-8260
Carl Howard,	CIVIL ACTION NO. 93-C-6932
Jessie Howard,	CIVIL ACTION NO. 93-C-4170
Johnnie Hudnall,	CIVIL ACTION NO. 93-C-4174
Robert William Hugus,	CIVIL ACTION NO. 93-C-6205
Russell James,	CIVIL ACTION NO. 92-C-8284
Charles Edward Jarnett,	CIVIL ACTION NO. 93-C-261
Homer Lawrence Jeffers,	CIVIL ACTION NO. 93-C-6206
Ralph O'Jay Jeffrey,	CIVIL ACTION NO. 93-C-4186
Hobert Johnson,	CIVIL ACTION NO. 92-C-4185
Malcolm Earl Johnson, Jr.,	CIVIL ACTION NO. 92-C-4186
Robert Joseph Johnson,	CIVIL ACTION NO. 93-C-6207
Ava Jones, Jr.,	CIVIL ACTION NO. 93-C-4206
William Kenneth Kazee,	CIVIL ACTION NO. 93-C-4215
Steve Kelemen,	CIVIC ACTION NO. 93-C-4219
Arden Clyde Knight,	CIVIL ACTION NO. 93-C-6949
Robert Frank Kotson, Sr.,	CIVIL ACTION NO. 93-C-4228
Donald Caltee Kuhn,	CIVIL ACTION NO. 93-C-4230
Charles Donald Langley,	CIVIL ACTION NO. 93-C-4233
Robert Ray Large,	CIVIL ACTION NO. 93-C-6209
Walter Lavender,	CIVIL ACTION NO. 93-C-4235
John L. Lawhorn,	CIVIL ACTION NO. 93-C-6210
Paul Harrison Leach,	CIVIL ACTION NO. 93-C-4237
Danny Lee Lewis,	CIVIL ACTION NO. 92-C-4215
Edgar Earl Little,	CIVIL ACTION NO. 93-C-1623
Orazio Lucento,	CIVIL ACTION NO. 93-C-6214
Henry Alex Lunsford,	CIVIL ACTION NO. 93-C-4249
Edward Jackson Lynch,	CIVIL ACTION NO. 93-C-4250
Walter J. Mallory,	CIVIL ACTION NO. 93-C-6958
Louis Eugene Martin,	CIVIL ACTION NO. 93-C-6961
Harold Massie,	CIVIL ACTION NO. 93-C-4530
Lynden Bernadine Massie,	CIVIL ACTION NO. 93-C-4263
Billy Ray Matics,	CIVIL ACTION NO. 93-C-6215
Everett Maynard,	CIVIL ACTION NO. 93-C-4960
John Russell McCabe,	CIVIL ACTION NO. 93-C-4270
James Wheeler McConnell,	CIVIL ACTION NO. 93-C-6962

James William McFarland, Sr.,	CIVIL ACTION NO. 69-C-6965
William Edward McGivern,	CIVIL ACTION NO. 93-C-6220
William Joe McNeely,	CIVIL ACTION NO. 93-C-6967
Sterling McPeek,	CIVIL ACTION NO. 93-C-6968
Berman Earl Meadows, Jr.,	CIVIL ACTION NO. 93-C-6223
Harry Robert Meeks,	CIVIL ACTION NO. 93-C-6970
Charles Henry Melvin,	CIVIL ACTION NO. 93-C-6971
Lonnie Burton Mick,	CIVIL ACTION NO. 93-C-4963
Frank Ernest Miller,	CIVIL ACITON NO. 93-C-1639
Ernest Griffith Moore,	CIVIL ACTION NO. 93-C-6972
Ralph Grayden Moore,	CIVIL ACTION NO. 93-C-4297
George Carlton Mosby,	CIVIL ACTION NO. 93-C-4301
Harlo Robert Nance,	CIVIL ACTION NO. 93-C-4313
John Hershel Neace,	CIVIL ACTION NO. 93-C-305
Raymond Allison Nelson,	CIVIL ACTION NO. 93-C-6976
Arnold Adolphus Newhouse,	CIVIL ACTION NO. 93-C-6977
Dewey Gene Newman,	CIVIL ACTION NO. 93-C-4536
Chester James Nibert,	CIVIL ACTION NO. 92-C-8504
Hubert Lee Niswander,	CIVIL ACTION NO. 93-C-6979
James Samuel Parsons,	CIVIL ACTION NO. 93-C-6984
Joseph Pavlovic,	CIVIL ACTION NO. 93-C-6229
Marty Lee Penix,	CIVIL ACTION NO. 93-C-315
James Elwood Perry,	CIVIL ACTION NO. 93-C-4974
James Henry Pyles,	CIVIL ACTION NO. 93-C-6990
Glen Freeman Queen,	CIVIL ACTION NO. 93-C-317
Joe Radcliff,	CIVIL ACTION NO. 93-C-6236
Robert Milton Rayburn,	CIVIL ACTION-NO. 93-C-318
Woodrow Wilson Reed,	CIVIL ACTION NO. 93-C-320
David E. Rhodes,	CIVIL ACTION NO. 93-C-6237
Larry Eugene Riffe,	CIVIL ACTION NO. 93-C-4364
Gail Riggs,	CIVIL ACTION NO. 93-C-6992
Cobern Rigsby, Jr.,	CIVIL ACTION NO. 93-C-4367
Hassil Parker Robinett,	CIVIL ACTION NO. 93-C-4979
Henry Clay Robinson,	CIVIL ACTION NO. 93-C-330
Hollis Virgil Rose,	CIVIL ACTION NO. 93-C-4375
James Rufford Rowe,	CIVIL ACTION NO. 93-C-6242
Kenneth Rowe,	CIVIL ACTION NO. 92-C-8624
William Edward Rowe, Sr.,	CIVIL ACTION NO. 93-C-4379
Harry Cecil Rucker,	CIVIL ACTION NO. 93-C-4982

Kenneth Warren Rumbaugh,	CIVIL ACTION NO. 93-C-4380
Paul Frank Rymer,	CIVIL ACTION NO. 93-C-6997
George Dewey Scott,	CIVIL ACTION NO. 93-C-4387
Leonard N. Sears,	CIVIL ACTION NO. 93-C-6998
David Allen Sevier	CIVIL ACTION NO. 93-C-6999
James Thomas Sheets,	CIVIL ACTION NO. 93-C-4398
Hollis Curl Short,	CIVIL ACTION NO. 92-C-8670
Francis Dean Simpson,	CIVIL ACTION NO. 93-C-7000
John Phillip Simpson,	CIVIL ACTION NO. 93-C-7001
Ronald Eugene Sines,	CIVIL ACTION NO. 93-C-7002
William Eugene Slater,	CIVIL ACTION NO. 93-C-4407
Lester Slawter,	CIVIL ACTION NO. 92-C-470
Claude Junior Smith,	CIVIL ACTION NO. 92-C-8684
Charles Lewis Snyder,	CIVIL ACTION NO. 93-C-4414
James McCoy Spangler,	CIVIL ACTION NO. 93-C-7004
Claude William Stinson,	CIVIL ACTION NO. 93-C-4422
George F. Stock,	CIVIL ACTION NO. 93-C-6252
Marshall Ray Tackett,	CIVIL ACTION NO: 92-C-8747
James Kenneth Taylor,	CIVIL ACTION NO. 93-C-6255
Daniel Wilson Thomas,	CIVIL ACTION NO. 93-C-7018
Walter Martin Thomason,	CIVIL ACTION NO. 93-C-7019
Willard Raymond Todd,	CIVIL ACTION NO. 93-C-6257
John Cecil Towles,	CIVIL ACTION NO. 93-C-7021
Frederick Ray Trusty,	CIVIL ACTION NO. 93-C-4440
James Thomas Turner,	CIVIL ACTION NO. 93-C-5002
Eli Lee Tyo, Jr.,	CIVIL ACTION NO. 93-C-4443
Bennie Franklin Vanhorn,	CIVIL ACTION NO. 93-C-4449
Andrew Douglas Vaughn,	CIVIL ACTION NO. 93-C-385
James Elbert Vaught, Sr.,	CIVIL ACTION NO. 93-C-4450
William Franklin Ward,	CIVIL ACTION NO. 93-C-5003
Roy Emmitt Warren,	CIVIL ACTION NO. 93-C-5005
Albert Richard Waters,	CIVIL ACTION NO. 93-C-6262
Paul Edward Webb,	CIVIL ACTION NO. 93-C-5006
Owen Lawrence Weldon,	CIVIL ACTION NO. 93-C-4470
James Oris Whaley,	CIVIL ACTION NO. 93-C-5012
Harold Emile Willis,	CIVIL ACTION NO. 92-C-8837
George Garland Wilson,	CIVIL ACTION NO. 93-C-2027
Leonard Eugene Wilson,	CIVIL ACTION NO. 92-C-8840
Carl Everett Wimmer,	CIVIL ACTION NO. 93-C-7031

Floyd Ester Woods, CIVIL ACTION NO. 92-C-8859
George Denzil Yolcum, CIVIL ACTION NO: 92-C-4397
Cyril Eugene Yost, CIVIL ACTION NO. 93-C-1733
Plaintiffs,

V.

CSX TRANSPORTATION, INC.
Individually and as successor
to the Chesapeake & Ohio Railroad Company,
Baltimore & Ohio Railroad, Western Maryland Railway,
and the Chessie System
A Virginia Corporation
Serve: A.F. Bobersky
Chafin Bldg, 517 9th Street
Huntington, WV 25701

CONSOLIDATED RAIL CORPORATION (CONRAIL)
As Successor to Penn Central Company, Penn Central
Corporation,
Pennsylvania-New York Central Transportation Company,
and the Pennsylvania Railroad
Serve: CT Corporation
Bank One Center, Suite 1600
Charleston, WV 25301

AMERICAN PREMIER UNDERWRITERS, INC.
NORFOLK AND WESTERN RAILWAY CO.
Individually and as a successor to
the Norfolk Southern Railway Co.,
A Virginia Corporation
Serve: Richard A. Keeney
8th North Jefferson Street
Roanoke, VA 24042
Defendants.

ORIGINAL COMPLAINT AND JURY DEMAND

The plaintiffs, by their undersigned counsel, hereby brings suit against the defendants and for causes of action allege as follows:

1. This is an action for asbestos related personal injuries arising under the provisions of the Federal Employer's Liability Act, 45 U.S.C. Section 51, et seq., specifically including the Federal Safety Appliance Act, 45 U.S.C. Sections 1 through 16, The Locomotive Boiler Inspection Act, 45 U.S.C. Sections 22 through 34 and common law negligence principles.

2. This Court has jurisdiction over this case under 45 U.S.C. Section 51 et seq. and 28 U.S.C. Section 1445 (non-removable actions).

3. The Plaintiffs were employees of the railroad and contacted occupational diseases within the scope of that employment.

4. The amount in controversy, exclusive of interest and costs, exceeds the jurisdictional amount of this Court and this Court has jurisdiction and venue hereof.

5. CSX Transportation, Inc. is a successor to the Chesapeake & Ohio Railroad Company and is a Virginia Corporation. Hereinafter, this defendant is referred to as "the railroad".

6. Consolidated Rail Corporation is a successor to various railroads which employed the plaintiff, including but not limited to, Penn Central Transportation Company, Penn Central Corporation, Pennsylvania-New York Central Transportation Company, the Pennsylvania Railroad and New York Central Railroad.

7. Norfolk and Western Railway Company is a Virginia Corporation and is a wholly owned subsidiary of Norfolk

Southern Railway Company. Hereinafter, this defendant is referred to as "N&W".

All of the allegations contained in Count I are attributable to "the railroad" and are likewise attributable to all the above-referenced defendants.

8. During their employment with the railroad, the Plaintiffs were exposed to asbestos and asbestos-containing products on a repeated basis as well as other harmful dusts. Plaintiffs were required by the railroad to work with and near toxic asbestos and asbestos-containing products and other harmful dusts.

9. The Plaintiffs were unaware of the toxic propensities of the asbestos and asbestos-containing products and other harmful dusts to which they were exposed.

10. As a direct and proximate result of their exposure asbestos and asbestos-containing products and other harmfi dusts, without any lack of due rare on his part, the Plaintiff contracted asbestosis and other dust diseases related to such exposure.

11. The Plaintiffs were unaware of the cause of their latent and deteriorating medical condition until diagnosed as suffering from same within the last two (2) years.

12. The railroad owed the Plaintiffs a duty to have them work in a safe employment environment under the Federal Employer's Liability Act.

13. The railroad, by and through its duly authorized agents, breached this duty to the plaintiffs by:

(a) Failing to provide the Plaintiffs with a reasonably safe work place;

(b) Failing to furnish the Plaintiffs with safe and suitable tools and equipment including adequate protective masks and protective inhalation devices;

(c) Failing to warn the Plaintiffs of the true nature and hazardous efforts of asbestos and asbestos-containing products;

(d) Failing to operate a locomotive repair facility in a reasonably safe manner;

(e) Failing to provide instructions or a method for the safe use of asbestos;

(f) Failing to provide adequate, if any, instructions in the use or removal of old asbestos products;

(g) Failing to test asbestos-containing products prior to requiring employees to work with the same, to determine their ultra-hazardous nature;

(h) Formulating and using a method of handling asbestos and asbestos-containing products which exposed the Plaintiffs to high concentrations of asbestos fibers;

(i) Failing to provide the Plaintiffs with safe and proper ventilation systems in the railroad facilities;

(j) Allowing unsafe practices to become standard practice;

(k) Failing to exercise reasonable care in publishing and enforcing a safety plan and method of handling and installing asvestos and asbestos-containing products;

(l) Failing to inquire of the suppliers of asbestos and asbestos-containing products, the nature of asbestos;

(m) Requiring the Plaintiffs to work with ultra-hazardous asbestos and asbestos-containing products;

(n) Failing to exercise adequate, if any, care for the health and safety of the Plaintiffs;

(o) Failing to periodically test and examine the Plaintiffs to determine if they were subject to any ill

effects of their exposure to asbestos and asbestos-containing products; and

(p) Failing to periodically inspect its locomotives, boilers and their appurtenances in order to ascertain any contamination by asbestos fibers.

14. As a direct and proximate result of the breach of duty by the railroad, the Plaintiffs was exposed to toxic asbestos and asbestos-containing products and other harmful dusts.

15. As a direct and proximate result of the negligence of the railroad, the Plaintiffs have suffered personal injury, great pain, extreme anxiety, and they truly believe their injuries and disabilities are permanent; their earning capacity has been greatly reduced; their enjoyment of life has been greatly diminished; and their expected life span has been greatly shortened.

16. As a direct and proximate result of the negligence of the railroad, the Plaintiffs, because of health problems caused by this negligence, has [sic] been forced to incur medical expenses for doctors, hospitals, drugs and health care services, and they truly believe that they will be forced to incur additional expenses in the future in an effort to treat their condition.

17. The Plaintiffs were strong, able-bodied workman [sic] capable of gainful employment at the time of the manifestation of their illness. As a result of their illness, the Plaintiffs have suffered damages by way of lost wages and a diminished ability to render services, society, affection, counseling and support to his household [sic].

WHEREFORE, the Plaintiffs claims [sic] compensatory damages in the amount deemed sufficient by the jury with interest and costs of suit herein.

JURY DEMAND

The plaintiffs demand a trial by jury on all issues presented herein.

Plaintiffs
By Counsel

/s/ [illegible]
JAMES F. HUMPHREYS
Bank One Center, Suite 1113
707 Virginia Street East
Charleston, WV 25301
(304) 343-4185

Ness, Motley, Loadholt,
Richardson & Poole

By: /s/ [illegible]
JAMES H. RION, JR.
P.O. Box 1137
Charleston, SC 29402
(803) 577-6747

IN THE CIRCUIT COURT OF KANAWHA COUNTY,
WEST VIRGINIA

FREEMAN AYERS,	CIVIL ACTION NO. 93-C-6857
DOYLE JOHNSON,	CIVIL ACTION NO. 92-C-8888
JAMES SPANGLER,	CIVIL ACTION NO. 93-C-7004
RALPH BAILEY,	CIVIL ACTION NO. 92-C-8979
CLIFFORD VANCE,	CIVIL ACTION NO. 92-C-5829
JOHN SHIRLEY,	CIVIL ACTION NO. 92-C-8970
CARL BUTLER,	CIVIL ACTION NO. 93-C-6876

Plaintiffs,

v.

NORFOLK AND WESTERN RAILWAY COMPANY
a corporation, et al.,

Defendants.

NORFOLK AND WESTERN RAILWAY COMPANY'S
MOTION *IN LIMINE* TO EXCLUDE CANCER EVIDENCE

NOW COMES the Defendant, Norfolk and Western Railway Company ("defendant" or "N&W") by counsel, Fred Adkins and Rodney L. Baker II, and pursuant to Rule 103(c) and 403 of the West Virginia Rules of Evidence and moves this Court *in limine* to exclude all evidence referring to cancer at the trial of the above-referenced civil action. As support for its Motion, defendant state as follows:

1. That no plaintiff allegedly suffers from any form of cancer, they merely allege asbestos related disease, or mixed dust pneumoconiosis;

2. That asbestosis, asbestos related pleural disease, and mixed dust pneumoconiosis alone do not necessarily result in an increased risk of cancer;

3. That evidence of Plaintiffs' "fear of cancer", or any mention of cancer is irrelevant;

4. That the introduction of cancer evidence would inflame the jury and invite consideration by the jury of a terminal illness when there is no evidence whatsoever to support such a proposition;

5. That extreme prejudice will flow to defendant if cancer evidence is admitted at the trial of this action; and

6. That all cancer evidence should be excluded from the trial of the claims of these plaintiffs under Rule 403 of the West Virginia Rules of Evidence.

In further support of defendant's position, defendant hereby incorporates by reference its contemporaneously fled Memorandum in Support of this Motion *In Limine* in the above-captioned action.

WHEREFORE, for all of the above reasons, defendant respectfully requests that its Motion *In Limine* be granted.

NORFOLK AND WESTERN RAILWAY CO.

By /s/ Rodney Baker, II
Of Counsel

Fred Adkins, Esquire (WVSBNo.: 0076)
Rodney Baker II, Esquire (WVSBNo.: 6859)
HUDDLESTON, BOLEN, BEATTY, PORTER & COPEN
611 Third Avenue
P.O. Box 2185
Huntington, WV 25722-2185
(304) 691-8310
Counsel for Defendant,
Norfolk and Western Railway Company

IN THE CIRCUIT COURT OF KANAWHA COUNTY,
WEST VIRGINIA

FREEMAN AYERS,	CIVIL ACTION NO. 93-C-6857
DOYLE JOHNSON,	CIVIL ACTION NO. 92-C-8888
JAMES SPANGLER,	CIVIL ACTION NO. 93-C-7004
RALPH BAILEY,	CIVIL ACTION NO. 92-C-8979
CLIFFORD VANCE,	CIVIL ACTION NO. 92-C-5829
JOHN SHIRLEY,	CIVIL ACTION NO. 92-C-8970
CARL BUTLER,	CIVIL ACTION NO. 93-C-6876

Plaintiffs,

v.

NORFOLK AND WESTERN RAILWAY COMPANY
a corporation, et al.,

Defendants.

MEMORANDUM OF LAW IN SUPPORT OF DEFENDANT, NORFOLK AND WESTERN RAILWAY COMPANY'S, MOTION *IN LIMINE* TO EXCLUDE CANCER EVIDENCE

Norfolk and Western Railway Company, ("defendant" or "N&W"), by counsel, hereby moves this Court for an Order excluding evidence of plaintiffs' alleged asbestos exposure and the development of cancer, the alleged increased risk of developing cancer, the fear of cancer, or any other mention of the alleged relationship between asbestos exposure and cancer. The grounds for this Motion include: (1) the claims of plaintiffs' are predicated upon an allegation of asbestosis, asbestos related pleural disease, or mixed dust pneumoconiosis; (2) no plaintiff alleges that he now has cancer; (3) evidence concerning cancer is irrelevant to the issues of this case; and (4) the admission of evidence regarding cancer would result in extreme prejudice to defendant.

STATEMENT OF FACTS

Plaintiffs filed with this Court Complaints alleging, *inter alia*, that they had suffered a severe injury to their bodies and respiratory systems as a result of exposure to irritants while in the employ of Defendant, Norfolk and Western Railway Company. The Complaints sought to establish causes of action under the Federal Employers' Liability Act, 45 U.S.C. § 51 *et. seq.* (FELA)[1] against the Defendant. In the Complaints, plaintiffs maintain that Defendant violated various duties allegedly owed to them by failing, among other things, to provide them with a reasonably safe place within which to work. *See*, Complaints. As a result of these alleged breaches of duty, the plaintiffs maintain that they were exposed to hazardous substances which caused severe and permanent injury to their persons. *See* Complaints.

ARGUMENT

Plaintiffs' do not present an "actionable injury" which would allow the introduction of cancer evidence. As such, the evidence is irrelevant to the instant action. Moreover, the evidence should not be admitted on the issue of liability because the extreme prejudice which would flow to the defendants is substantially outweighed by its probative value.

[1] Under FELA, a railroad has a duty to provide its employees with a reasonably safe place to work. This duty, however, is not absolute and a railroad is not deemed an insurer of its employees' safety. *Inman v. Baltimore and O.R. Co.*, 361 U.S. 138 (1960); *Atlantic Coast Line R. Co. v. Craven*, 185 F.2d 176 (4th Cir. 1950), *cert. denied* 340 U.S. 952. A railroad's duty to warn is limited to those perils which may be reasonably anticipated. A railroad is held to the standard of care of a reasonably prudent person. *Fowler v. Gulf, M. and 0. R. Co.*, 286 S.W.2d 404 (Mo.App. 1956).

A. EVIDENCE THAT PLAINTIFFS MAY HAVE AN INCREASED RISK OF CONTRACTING CANCER SHOULD BE EXCLUDED.

Indeed, cancer evidence may be introduced in a non-cancer case to establish damages in connection with cancer which will *probably* develop in the future. *Jackson v. Johns-Manville Sales Corp.*, 750 F.2d 1314, 1321 (5th Cir. 1985) (*Jackson* II). However, as the Third Circuit Court of Appeals has held, the damages of which the cancer evidence would be probative must be available to the plaintiff as a matter of law. *Id.* The *Jackson* Court expounded:

> Whether these damages are available in the instant case may depend on the nature of the actionable injury. If the actionable injury here was the exposure to asbestos, as Jackson insists, he may be entitled to recover damages for those future consequences, such as the manifestation of cancer, that could be established in terms of reasonable probabilities and for the mental suffering that is the direct consequence of the increased risk of cancer caused by the asbestos exposure. If, on the other hand, exposure to asbestos is regarded as too abstract an invasion, either as a general rule or in the context of latent disease, mass tort litigation, and instead Jackson's asbestosis itself is considered to be the only actionable harm, Jackson may have no right to recover these damages since asbestosis alone does not result in an increased risk of cancer.

Id. at 1322. Simply stated, as the *Jackson* Court recognized, the question turns on a matter of probabilities.

Unlike some states' definition, a plaintiff's "actionable injury" in a FELA action is that injury which is *manifest. See* 45 U.S.C. § 51. Section 51 provides, in part, that "every common carrier by railroad . . . shall be liable in damages to any person suffering *injury* while he is employed by such

carrier . . . for such *injury* . . . resulting in whole or in part from the negligence of any . . . such carrier . . . ." (emphasis added). Moreover, for statute of limitations purposes in a FELA action, "the afflicted employee can be held to be 'injured' *only when the accumulated effects of the deleterious substance manifest themselves. . . .*" *Urie v. Thompson*, 337 U.S. 163, 170 (1949)(citations omitted) (emphasis added).

Recall, Plaintiffs allege asbestosis, asbestos related pleural disease, or mixed dust pneumoconiosis. The Third Circuit Court of Appeals has held, as a matter of federal law, that a FELA action for an asbestos-related injury does not exist before manifestation of an injury. *Schweitzer v. Consolidated Rail Corp.*, 758 F.2d 936, 942 (3rd Cir. 1985), *cert. denied* ___ U.S. ___, 106 S.Ct. 183. The court explained:

> If mere exposure to asbestos were sufficient to give rise to a FELA cause of action, countless seemingly healthy railroad workers, workers who might never manifest injury, would have tort claims cognizable in Federal court. *It is obvious that proof of damages in such cases would be highly speculative, likely resulting in windfalls for those who never take ill and insufficient compensation for those who do. Requiring manifest injury as a necessary element of an asbestos-related tort action avoids these problems and best serves the underlying purpose of tort law: the compensation of victims who have suffered.*

Id. (emphasis added).

As the *Schweitzer* Court recognizes, sound public policy dictates that a plaintiffs injury must be defined in concrete terms. To allow a plaintiff recovery for cancer-related damages prematurely, would result in over-compensation if a plaintiff never contracts cancer. To like effect, if a plaintiff later develops cancer, the compensation paid earlier may well be inadequate. In other words, limiting the type of damages

which a plaintiff may recover in a FELA asbestos action ensures that adequate and just compensation is available for all railroad workers who allegedly have asbestos-related injuries.

Under the FELA, mere exposure to asbestos is clearly not an actionable injury. Instead, a plaintiff has an actionable injury when he can present an apparent physical injury. In the present case, plaintiffs' only allegation of an asbestos-related physical injury is that they have asbestosis, asbestos related pleural disease and\or mixed dust pneumoconiosis. Plaintiffs can offer no evidence that their alleged conditions will likely result in a cancerous condition, and any evidence of an increased risk of cancer is inherently speculative in nature. Accordingly, Plaintiffs have no right to recover damages for cancer which may develop in the future or for mental anguish based on an increased risk of cancer. Because Plaintiffs cannot recover the damages of which the cancer evidence would be probative, the cancer evidence itself is irrelevant and thus, should be excluded.

Asbestosis and cancer are distinct diseases. The only relationship between the two is that both can be precipitated by exposure to asbestos. Evidence of an increased risk of cancer is, thus, surmise. The law is well-settled that future damages are recoverable only if there is a reasonable certainty that future damages will result. *Shelton v. Thompson*, 148 F.2d 1 (7th Cir. 1945). To introduce evidence of the relationship between asbestos exposure and cancer, a plaintiff must, therefore, show to a reasonable degree of medical certainty that a plaintiff has cancer or will contract cancer as a result of his exposure to asbestos. *Id.*

Other West Virginia Circuit Courts have excluded similar evidence because of its speculative nature. For instance, as the Honorable Robert A. Burnside of the Raleigh County Circuit Court held, "I think your motion [*in limine* to exclude evidence of Plaintiff's increased risk of cancer] is granted. Its

speculative. Now I don't know if the doctor's said there's a 54 percent chance; the greater chance statistically, then we have another problem. Fortunately or unfortunately, however, you look at it, that isn't before us. Apparently, all we're going to have is two doctors saying there is a statistical link between this thing and cancer somewhere in the future." *Tr. R.* at 19, *Harvey v. CSX Transportation, Inc.*, Civil Action No. 93-C-1224-B (Raleigh Co. Cir. Ct. W.Va. 1995), relevant portions attached hereto as *Exhibit A*. Simply stated, as the circuit court recognizes, an action for an increased risk of contracting cancer is a "speculative claim to a future injury." *Id.* at 21. "What is absent here is a present injury or evidence of a metabolic or a somatic change that, aside from statistics, can be seen physically to be a precursor to a further condition." *Id.* at 98.

B. EVIDENCE OF PLAINTIFFS' FEAR OF CANCER SHOULD BE EXCLUDED.

Defendants anticipate that plaintiffs will assert that they are entitled to introduce evidence of their fear of contracting cancer. In actuality, plaintiffs seek compensation for a wholly mental injury. In this case, there is no evidence that plaintiffs have suffered any physical harm from alleged mental anguish based on fear of contracting cancer in the future. There is nothing in the plaintiffs' depositions, any of the medical records, or plaintiffs' witness lists to indicate that plaintiffs have suffered physical harm from their alleged mental anguish based on fear of contracting cancer. *See Excerpt of Deposition Transcript* of F. Ayers at Pg. 113, attached hereto as *Exhibit B*, D. Johnson at Pgs. 69-70, attached hereto as *Exhibit C*, J. Spangler at Pgs. 153-154, attached hereto as *Exhibit D*, R. Bailey at Pg. 70, attached hereto as *Exhibit E*, C. Vance at Pgs. 75-76[2], attached hereto as *Exhibit F*, J.

[2] As reflected by Mr. Vance's deposition testimony, he mistakenly believes that he has asbestos induced cancer. However, nothing in his

Shirley at Pgs. 102-109, attached hereto as *Exhibit G*[3], C. Butler at Pgs. 107-108, attached hereto as *Exhibit H*. No plaintiff has sought medical or psychological treatment for an alleged fear of cancer. The threat of future harm, not yet realized, is not enough to support the introduction of fear of cancer evidence. Consequently, the evidence should be excluded.

A recent Second Circuit Opinion delineates the circumstances under which a fear of cancer-claim is viable. The plaintiff in *Marchica v. Long Island Railroad Co.*, 31 F.3d 1197, 1202 (2nd Cir. 1994), unlike the plaintiffs in the case at bar, alleged a claim for negligent infliction of emotional distress. Accordingly, the court applied the "zone of danger" test as delineated in *Consolidated Rail Corp. v. Gottshall*, ___ U.S. ____, 114 S.Ct. 2396 (1994).[4] As the *Marchica* Court

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medical records supports his erroneous belief. Mr. Vance admitted at page 67 of his deposition that no doctor has ever diagnosed him with cancer. Irrespective of his belief, Mr. Vance offered no testimony that he has experienced any form of physical manifestation of an alleged fear of cancer. Similarly, Mr. Vance has not sought treatment or counseling for his alleged fear of cancer.

[3] Mr. Shirley professes to have a fear of cancer despite having no information that asbestos exposure can be casually related to cancer. Mr. Shirley admits that he is a worry wart, that he has never thrown up as a result of his alleged "fear of cancer", and that he has never sought treatment or counseling for his "alleged fear of cancer".

[4] In *Gottshall*, the Court adopted a very narrow view of claims for negligent infliction of emotional distress holding that this cause of action did not encompass claims for workplace related stress and harassment. *Id.* at 2409. Imposing a duty to avoid a stressful work environment would "make railroads the insurers of the emotional well being and mental health of their employees." *Id.* at 2409. Unwilling to take this radical step, the Court stated with clarity that FELA is "not an insurance statute." *Id.* The *Gottshall* court adopted the common law "zone of danger" test delimiting the proper scope of an employer's duty under FELA for claims of negligent infliction of emotional distress. Those claims, the court stated, are reserved to those cases where severe emotional distress occurs as a

explained, in fear-of-developing-disease cases "the exposure requirement—plus *actual likelihood* of developing the disease—. . . is a means of ensuring the genuineness of the claim." *Marchica*, 31 F.3d at 1205. In other words, "mental anxiety is not considered reasonable unless there is, at the very least, some evidence substantiating both actual exposure to the disease-causing agent . . . and a likelihood of contracting the disease as a result. *Doner v. Adams Contracting Inc.*, 617 N.Y.S. 2d 565, 566 (A.D. 3 Dep't 1994). The plaintiff in *Marchica* sustained a puncture wound from a discarded hypodermic needle. The court found that because the plaintiff suffered a physical impact he was entitled to receive compensation for his emotional injuries. Moreover, the court noted that the plaintiff, unlike the current plaintiffs, had physical manifestations of his emotional distress such as post traumatic stress disorder, accompanied by sleeplessness, weight loss, and vomiting which was indicia of the genuiness of his emotional distress claim.

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result of an impact or threat of physical impact where the plaintiff was within the "zone of danger." As the Circuit Court of Appeals for the District of Columbia emphasized, the emotional injuries presented by a FELA plaintiff must be "serious and verifiable." *McMillan v. National R.R. Passenger Corp.*, 648 A.2d 428, 433 (D.C. App. 1994).

The "zone of danger" test further limits recovery for emotional injury to "those plaintiffs who sustain a physical impact as a result of a defendant's conduct, or who are placed in immediate risk of physical harm by that conduct." *Gottshall*, 114 S.Ct. at 2406 (emphasis added). Physical impact under the "zone of danger" test announced in *Gottshall* contemplates an impact relating to the resulting emotional distress. *Accord Bloom v. Consolidated Rail Corp.*, 41 F.3d 911 (3rd Cir. 1994) (holding that engineer did not sustain a physical impact when the locomotive engine struck a pedestrian); *Grube v. Pacifrc R. Co.*, 886 P.2d 845, 852 (Kan.1994)(holding that engineer did not sustain a physical impact when he was thrown against the console of the locomotive engine). Where a plaintiff can not [sic] demonstrate that he suffered a physical impact, he must show that the threat of physical impact is more than "minimal or negligible." *McMillan*, 648 A.2d at 434.

The Second Circuit Court of Appeals recent [sic] held that a railroad worker may recover for his fear of contracting an asbestos-related disease based solely on his exposure to asbestos where the worker had contracted an asbestos-related disease or exhibited any symptoms of an asbestos related disease. *Buckley v. Metro-North Commuter Railroad*, No. 95-7399, 1996 U.S. App. LEXIS 6096 (2nd Cir. 1996). On appeal, the United States Supreme Court of Appeals reversed the Second Circuit's decision finding that the "physical impact" required for recovery of damages for negligent infliction of emotional distress did not include "a contact that amounts to no more than an exposure—an exposure, such as that before us, to a substance that poses some future risk of disease and which contact causes emotional distress only because the worker learns that he may become ill after a substantial period of time." *Metro-North Commuter R.R. Co. v. Buckley* 117 S.Ct 2113, 2118 (1997). Relying on the Supreme Court's decision in *Buckley*, the Superior Court of Chatham County, Georgia, held that a plaintiff may not recover for emotional distress arising from fear of cancer until plaintiff begins to manifest symptoms of cancer. *See* Order attached hereto as *Exhibit I*. Plaintiffs in the case at bar can not offer objective proof to establish that they suffered an emotional injury. To the contrary, as previously noted, plaintiffs do not exhibit physical manifestations of an alleged fear of contracting cancer.

Unquestionably, the "zone of danger" standard does not allow recovery for all alleged emotional distress and as such plaintiffs should be precluded in the instant matter from introducing any cancer evidence.

C. CANCER EVIDENCE SHOULD NOT BE ADMITTED ON THE ISSUE OF THE RAILROAD'S LIABILITY BECAUSE THE PROBATIVE VALUE OF THE EVIDENCE IS SUBSTANTIALLY OUTWEIGHED BY ITS PREJUDICIAL EFFECT.

As previously noted, plaintiffs have no right under FELA to recover future damages for cancer or damages for mental anguish based on an increased risk of cancer. The cancer evidence, therefore, is irrelevant and inadmissible under Rule 402. If this Court finds, however, that the cancer evidence is admissible on the issue of the Railroad's liability, the evidence should be excluded under Rule 403 of the West Virginia Rules of Evidence.

As the Supreme Court of Appeals of West Virginia directed in *Voelker v. The Frederick Business Properties Company*, 465 S.E.2d 246 (W.Va. 1995), West Virginia Rules of Evidence 401, 402,[5] and 403 "are to be read together and are not to be applied in isolation." Rule 403 provides that "[a]lthough relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by consideration of undue delay, waste of time, or needless presentation of cumulative evidence." The term "unfair prejudice", as used in Rule 403, means "an undue tendency to suggest decision on an improper basis, commonly . . . *an emotional one*." W.V.R.E. 403 advisory committee's note. Of course, the mere fact that evidence is prejudicial

[5] Rule 402 states that "All relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by the Constitution of West Virginia, by these rules, or other rules adopted by the Supreme Court of Appeals." Rule 401 defines relevant evidence as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence."

does not, by itself, require its exclusion. Rather, the court must determine whether the prejudice is substantially outweighed by the probative value of the evidence. In making this determination, the court should consider the probable effectiveness of a limiting instruction. See W.V.R.E. 403 advisory committee's note.

The rules of relevancy, 401, 402, and 403, dictate against the admission of cancer evidence in the instant case for several reasons. First, plaintiffs do not have cancer. Thus, the evidence should be excluded because it is irrelevant. Further, a limiting instruction on the proper consideration of the cancer evidence will be ineffective because the mention of "cancer" evokes a strong response in all of us. In other words, the jury will consider the cancer evidence in ascertaining plaintiffs' damages and compensate them for injuries they do not have and more likely than not will never incur. The jury should not deliberate on a possibility that has no medical basis. Clearly, a mere possibility does not meet the reasonable degree of medical certainty standard.

WHEREFORE, for the foregoing reasons and for such other reasons as may appear to this Court, Defendant respectfully requests that its Motion *In Limine* To Exclude Cancer Evidence be granted.

NORFOLK AND WESTERN RAILWAY CO.

By /s/ Rodney Baker, II
Of Counsel

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IN THE CIRCUIT COURT OF KANAWHA COUNTY,
WEST VIRGINIA

FREEMAN AYERS,
DOYLE JOHNSON,
JAMES SPANGLER,
CLIFFORD VANCE,
JOHN SHIRLEY,
CARL BUTLER,

Plaintiffs,

vs. Civil Action No. 93-C-6857
92-C-8979
93-C-6876
92-C-8970
93-C-7004
92-C-5829

NORFOLK AND WESTERN RAILWAY COMPANY
a corporation,

Defendant.

TRIAL TRANSCRIPT
April 14, 1998

* * * *

[155] want to—

MR. RION: We oppose it.

THE COURT: Oppose it, okay. Well, let's go ahead and talk about this in order, then. Why don't you just summarize this issue of other cases and settlements?

My inclination is to believe, based on what my research has been, is that that's largely a question of discretion.

My habit in the past has been to be completely silent with respect to those issues of settlement unless there's an agreement between counsel to the contrary.

MR. BOITER: Essentially, there are several cases, the *Gauldin* case, which is a Supreme Court case out of Kansas. It's a Kansas Supreme Court case, it's not a federal case and FELA is federal law.

A St. Louis, Southwestern Railroad case is out of the District Court, Kansas, and in the United States District Court out of Kentucky.

All of those cases are saying the same thing, which is if FELA makes no provision for the reduction of damages recoverable by an employee against the railroad. And what it says is the railroad can go out, if they [156] think someone else was a contributing factor, they can go out and sue them all day long, but the damages for a Plaintiff, when they sue the railroad, is not recoverable; and it sort of comes off the *Rogers* case where it says that the railroad is responsible if their negligence contributes to the injury in whole or in part, they [sic] responsible for the entire injury. And because it's a creature of federal law the federal law and the federal courts have ruled there is no provision in FELA for the reduction of damages, or whoever is going to go out and sue the other person, so it had no relevance to these proceedings.

MR. BAKER: Your Honor, I think this goes back to what we started on yesterday, the misinterpretation—the deliberate misinterpretation of the *Rogers* case. The *Rogers* case stands for the proposition that a FELA plaintiff's burden to get his case before the jury is to show negligence, however slight, on the part of the railroad.

It does not speak to damages, who is responsible for payment of the damages.

I have a United States District Court case decided of January 24, 1997. It's *Barrow Smith versus* [157] *New Jersey Transit Rail Operations* that discusses a portion of damages in FELA cases.

It says the railroad's only responsible for the—I'm sorry, this case may not particularly say the railroad's only responsible for the portion of damages it caused. *Dell versus Baltimore and Lionel Railroad Company*, a Supreme Court of Pennsylvania case decided January 24, 1989; in that case it says that the railroad is only responsible for the damages it causes.

If the jury in these cases finds that the Plaintiff's alleged injury breathing impairment is 90 percent caused by Plaintiff's smoking, 50 percent caused by Plaintiff's smoking, 40 percent caused by the manufacturer or any other parties the Plaintiff has sued, and 10 percent caused by the railroad, the railroad is only liable for that 10 percent.

Now, I would be happy to let you look at copies of either the *Barrow Smith* or *Dell versus Baltimore*, an Ohio case. I will get you copies of those if you would like.

THE COURT: How do you—how do you propose to allocate fault in this case between N&W and the manufacturers?

[158] MR. BAKER: Well, Your Honor, I think the jury's entitled to know, via introduction of the—possible introduction of the Complaints filed against the manufacturers, that each of these Plaintiffs has made claims against other parties for the exact same injury they're claiming in this one.

THE COURT: Now, wait a minute. You're not saying that you're going to ask the jury to apportion fault or that you're going to put any evidence in in support of that proposition. So it's a red herring, isn't it?

MR. BAKER: No, Your Honor. We will ask the jury to apportion fault.

THE COURT: Based on what, that was my question?

MR. BAKER: Well, Your Honor, one, it's going to be all the Plaintiffs except one in these cases smoked cigarettes.

THE COURT: It doesn't have anything to do with the settlement.

MR. BAKER: Okay. But as far as apportioning fault regarding the settlements, unless you let the jury know that these Plaintiffs have made claims [159] against other parties for the exact injuries they're claiming now, not the amounts of the settlements. If you wish to set off the settlements and never advise the jury that there has been settlements against the other parties that is in your discretion, but the fact—I think the jury is given—the jury has to be informed in some way that there has been other cases filed and—

THE COURT: In aide of what?

MR. BAKER: In aide of their apportionment of damages in these cases.

THE COURT: Well, wait a minute. The only thing that I understood you said you were going to have them apportion is the Plaintiffs relative fault. Are you going to put on evidence about Pittsburgh Corning?

MR. BAKER: I'm not going to put on evidence that Pittsburgh Corning—

THE COURT: Well, what are they going to apportion with? What are they going to use to proportion?

MR. BAKER: I think we will put on evidence that the manufacturers were, in general terms, I can't speak to the specifics of this, you know, it will depend on how the evidence comes in at trial, but there may [160] well be evidence that the manufacturers knew more than they have told and, therefore, the railroad's conduct was permissible given the knowledge that it had.

THE COURT: Well, you can't just say we can't give this jury a verdict that says N&W Plaintiffs and manufacturers, can you?

MR. BAKER: My view—and there will be other factors, Your Honor.

MR. ADKINS: Judge, I just—

THE COURT: You've got to tell me exactly what evidence you're going to put on that we could entrust this jury with to allocate relative fault between Norfolk and Western and the manufacturers, now.

MR. ADKINS: I think we're confusing two things here. First of all, I think you are right. If we are going to try to say, from a fault standpoint, that we need evidence, and I think we will have evidence, some evidence at least, of manufacturers in generally, not specifically evidence, as to what the manufacturers know or what they should've done, et cetera, et cetera.

The second issue, though, is the apportionment of the damages. Certainly, if the doctors testify, and [161] they will in this case, that Dr. Gaziano, Dr. Renn, all of them, there's no dispute on this, that cigarette smoking causes problems, there's no dispute that many of these men have problems related to their cigarette smoking.

Now, what we were proposing in the jury form is that when you get to the part of apportioning the damage of this that, for example, using 100 as a number, and the jury would say that 40 of that is railroad and 60 is smoking, we're only responsible for 40 percent; and that's just common sense and logic.

I mean, certainly the railroad would not be responsible for injury caused by someone's fault anymore than it would be caused by someone shot himself in the hand, you know.

THE COURT: Although—and this is an entirely separate issue, but unless I'm mistaken you're going to have a witness that says that the specific Plaintiffs are suffering from smokers disease—

MR. ADKINS: Emphysema.

THE COURT: —and the Plaintiffs are going to have witnesses who are going to say that they're suffering from asbestosis—

[162] MR. ADKINS: —and emphysema.

THE COURT: Okay. That's my point.

MR. ADKINS: Now, I agree, if there's a dispute there, but there's going to be a dispute as to degree, I mean —

THE COURT: That doesn't have anything to do with—

MR. ADKINS: I understand, Your Honor. So the apportionment, clearly we're not responsible. I mean, that can't, I mean, that can't be the law and it's not the law that the railroad is responsible for someone smoking.

THE COURT: No, correct.

MR. ADKINS: So if the doctor testifies that all of his disease process is caused by smoking, another doctor testifies that none of it, then the jury is going to have to decide. Now, if they want to decide part—

THE COURT: None of this in anyway relates to this question of fault.

MR. ADKINS: I agree.

THE COURT: Other cases have shown this.

MR. ADKINS: Well, you're right. The only [163] thing I wanted to do on the other cases and settlement is, I think in terms of the jury understanding and knowing what's going on, that, and I understand the Court can make sure that someone doesn't recover twice for the same thing, so we're entitled to a setoff. But I think in order for the jury to understand and properly evaluate these cases they need to know that there are other cases pending by these same individuals for the same disease process.

We do this all the time in these cases we have; where we ask them. We did it in the discovery depositions that we did of these individuals, that they were part of Mon Mass II or III, whatever the number was up there. And that's all we're going to ask them.

We are going to ask them if they got—well, in the deposition we did ask them that they—if they got compensation and the answer was I don't remember or I don't know, or I don't know how much. But I don't intend to get into that part of it. Only to ask them if they have a lawsuit pending or if it's been dismissed, why, for the same—

THE COURT: Why?

MR. ADKINS: Why? So the jury understands [164] what's going on with these Plaintiffs. It's part of why you ask any of these questions, I guess.

You know, for the jury it's relative information about what the Plaintiffs have done. It might be relevant on the statute of limitations as to why they filed the suit up there.

THE COURT: Why?

MR. ADKINS: Well, because as to when they knew or should've known that they had a disease process. I don't know when that case was filed in relation to the statute, so until we hear their answer we don't know.

THE COURT: It still doesn't have anything to do with whether they made claims against somebody else.

MR. ADKINS: I think all these cases were filed first down here.

MR. RION: All these cases were filed first down here.

MR. ADKINS: Well, whatever, but the point is I ought to be able to inquire about it is all I'm saying, Judge. I don't know what their answers are.

THE COURT: I'm going to grant the [165] Plaintiffs motion. I think it's complete rhetoric.

How about this issue of come back for cancer?

Let me just—this is a pure seat of pants, but the one case we've got is the Bethany College case and my understanding from it would be that if an additional disease manifests itself after there's been a recovery by settlement or verdict that you're stuck in West Virginia. We're a one cause of action state and it's not been specifically addressed. And the question is do we—is that something we decided here today?

MR. RION: That's really my point is that it's not right, Judge. There's no clear guidance and it's not really in a posture where it can and should be decided, so—I mean, I'd like from an advocate standpoint, to be able to stand-up say, this is our last chance. This is all we get.

I'm sure Fred would like to say, oh, they can come back if they get cancer. In a way he'd like to say that, but on the other hand you've got the impact passed [sic] this case, and in some instances the client may not want him to say it because he'd be stuck with it and everything.

* * * *

[232] with occupational disease under FELA, later also brought those type of claims under recovery to the Boiler Inspection Act in limited circumstances.

THE COURT: I'll read your memoranda. If I need anything else I'll let you know.

MR. BAKER: Okay.

MR. RION: On the other things we've got here, I think, I can't remember if you ruled on the other.

THE COURT: I will. Are there any other issues that the Plaintiffs want to take up now that we've got some time that are not just related to opening statements?

MR. RION: I think our motions in limine cover everything that we want to cover. I guess that one other point that was raised in the argument that I don't think is—that you're not going to really need to decide, excuse me, until the instruction phase that I can introduce now, and that's simply that we disagree with Mr. Adkins' contention that, Number One, that smoking is contributory fault in these cases; and, Number Two, that the *Rogers* case stands for anything other than the proposition that the FELA causation [233] standard is does the railroad's negligence contribute, however slightly, to the injury, and I don't think I need to argue that.

You have the case, Your Honor. If you would just read it I don't think there would be any question in your mind whatever. Once you read it the question—the debate is does it apply to how much negligence or how much cause; and Mr. Adkins says it's how much negligence and I say it's how much cause, and Your Honor can read the case and make that decision.

I think the form jury instruction, pattern jury instruction in FELA cases says the railroad's responsible if it's negligence contributes, however slightly, to an employee's injury.

THE COURT: Mr. Boiter, you snagged my copy of *Rogers*.

MR. ADKINS: Judge, read *Dale versus B&O*, which is a Supreme Court of Pennsylvania case. It's an asbestos case. It's this very issue—it was denied to the U.S. Supreme Court on this issue. It deals with smoking and the fact that the railway is not responsible for any disease process other than what was caused by asbestos related exposure. It's not a—

[234] THE COURT: *Dale*?

MR. ADKINS: *Dale versus B&O*, and I think we have a copy of it here we can give to you.

MR. BAKER: I'll go make you a copy right now if you'd like.

MR. RION: And I agree with—

THE COURT: Do you know if it's just attached to your stuff?

MR. BAKER: I didn't—we haven't filed a motion on this. That's a copy of *Zarrow Smith versus New Jersey Transit Rail*. It talks about—

THE COURT: Is it *Dale*?

MR. RION: I agree they properly represent what *Dale* says. I just think it's an aberration and it is in conflict with the *Rogers* case, and there are a number, I believe, Mr. Boiter you cited a case that says smoking is not contributory fault in a pneumoconiosis case, didn't you?

MR. BOITER: The *Farmer* case.

MR. RION: Yes, and it comes back to the general concept, Judge, I think it's proper for them to show it, but it's, although this is not a Texas case, this issue came up in front of Judge Parker in the [235] *Salino* case, is smoking contributory fault in an asbestos case? And his ruling was that it can be and I agree that it can be under certain circumstances.

Number One, you've got to show that smoking caused the injury in question, and that would apply, obviously, in a lung cancer case most clearly. So, the one point that we have is smoking doesn't cause asbestosis.

Second, you've got to prove that the Plaintiff was careless in his smoking with regards to asbestos, so you've got to show some level of knowledge of the Plaintiff about the synergistic effect, and that was—we can get you Judge Parker's instruction.

Jane, can you call the office and get Judge Parker's jury instruction on contributory fault of smoking? We think in the absence, and I don't think there's any here in the absence, of some kind of proof about the synergistic effect.

It's, you know, in a way some other trial Judges in other jurisdictions, Judge, you can almost analogize to, if I get in an automobile wreck—this is the most extreme example, but it sort of makes a point. If I'm an alcoholic and have a bad liver and I [236] get in an automobile wreck and have trauma to my abdomen, the fact that I'm careless in drinking is really not contributory fault with regard to that accident. Unless I was drinking when I was driving.

But if I'm a former alcoholic with a damaged liver who gets stomach trauma, the fact that I was careless in drinking is carelessness, but it's not contributory fault with regard to an accident.

The same thing concept. Of course, it can go both ways. I mean, the decisions that I've seen in cases I've tried have been all over the board. Judge Watt, for example, permitted it in lung cancer cases, but not in asbestosis cases.

Other Judges have—there have been some Judges won't even permit it in a lung cancer case. Then you've got Judge Parker's view is a little bit more in the middle of the road. He permits it, but it has a different—

THE COURT: I ruled on, but it's been forever since I've done it because we've tried damage cases. I can't remember how I dealt with it, except that—

MR. ADKINS: I understand that FELA is a [237] little different, Judge, but I can't believe that anybody—that the law would even consider a concept that says that if you can prove that something, some damage was not caused by a particular Defendant, that that Defendant is responsible for that. I mean, if that's what the law is.

THE COURT: No, no, no. Oh, no, but that may be an on and off switch.It may be a jury's responsibility to determine between competing experts whether the man has asbestosis, which might be aggravated by the smoking, or smokers disease.

If it's smokers disease you're not responsible.

MR. ADKINS: That's not what they're arguing, Judge. They're saying that only if it's a smoking disease and asbestos—

THE COURT: No, I think what they're arguing is that it's not a place for comparative fault if it is a sole proximate cause. It's a different story all together.

MR. ADKINS: Okay, if I understand what you're saying is, the damage aspect of it, the jury could apportion that. For example, if—and I don't [238] know how you would do this, but that's the problem.

If it's—say it's 50/50 and the jury says, you know, it's $100.00. Now, as I understand, if the total damage is $100.00, then we're only responsible for $50.00 of it. See, is that what you're saying?

THF COURT: Well, 50/50 you don't pay anything.

MR. ADKINS: Well, no, Judge, this is FELA again.

MR. RION: Okay, it's pure comparative. My view would be, Judge, that the smoking—

THE COURT: Let me interrupt just a second and see if you can—both sides can kind of respond to what my perspective is on this.

I think it's going to depend entirely on what the doctors say about each individual Plaintiff, but let's take the extreme set of circumstances. Gaziano says that he's got asbestosis and the—your doctor says he's got smoker's disease.

There's no way, under those circumstances, a jury can come up with a 50/50 split. That's allowing them to just compromise the verdict because they've got conflicting evidence.

[239] Under those circumstances the jury would simply have to determine which of those two witnesses they want to believe. So if the person's condition was caused by asbestos, then they can recover and there's no fault attributed to them.

If smoking, on the other hand, they get nothing, period.

MR. ADKINS: But that's not the way the evidence comes in. As you know, is it's going to be combination.

THE COURT: Okay, now—

MR. RION: Most of these cases we're going to have the Plaintiff's case will be, not for most, but some of the cases, the Plaintiff's evidence will be that there is lung impairment that's caused in part by smoking and in part by asbestos.

I guess, you know, my point is, Number One, the smoking doesn't cause the asbestosis.

THE COURT: Right.

MR. RION: It's a different injury and I guess, you know, I think they should be instructed they are not to compensate him for any injury unless asbestos was a contributing factor to the injury.

[240] I guess where we differ is I don't think that under the *Rogers* case that the Court can send an instruction that says what's 100 percent of his loss for "his lung injury" and then apportion between cigarettes and asbestos.

Although, that's exactly what the *Dale* case is and I think the *Dale* case is wrong if you read *Rogers*, and then the only way they get a apportionment percentage, in my view, under the FELA structure is if they prove the Plaintiff was at fault with regard to his injury. Meaning, with regard to his asbestos disease.

And the only way to prove that is that the smoking contributed to the asbestos disease, and I think Judge Watt may

have been right in saying I'm only going to permit it in a lung cancer case, because that's where there is a causation.

And second, if he had some conduct with regard to his asbestos disease from smoking for which he could be held at fault. So, I think you have to show some knowledge of the synergism. So, I would say if there's no knowledge of the synergism, then they're not going to get a place on the verdict form for a percentage.

THE COURT: Synergism doesn't make any [241] difference in this case because we don't have any lung cases.

MR. RION: Unless they can show some connection between asbestosis and smoking. However, I think they're entitled to an instruction that you're not to compensate somebody for any injury unless it's caused by asbestos, and to argue that to the extent these people's problems are caused by cigarette smoking they shouldn't be compensated for that.

And I intend to also say and I think, in fact, I think Fred would be entitled to argue, and in fact—I can remember in the *Garper* case that Al Parnell was permitted to argue this, although it wasn't on the verdict form. That of his lung injury 60 percent—of course, 60 percent of his lung problem is due to smoking, 40 percent's due to asbestos and whatever you think his total loss is, if you want to, this is one way of going about it. You could figure out what his total loss from his lung problem is and do that apportionment.

I think what I'm more likely to tell them is just don't compensate him for his COPD, that we admit he wouldn't be as bad off if he hadn't have smoked and that his—

[242] THE COURT: How can the—I mean, is there going to be some evidence from some source that the jury's going to be able to decide what portion of a person's disability is attributable to asbestosis?

MR. RION: I don't think there's going to be—no doctor's going to sell a percentage. I mean, I don't think anybody's going to give them any guidance on it.

That's another objection I have to having it on the form. There's not going to be anybody who's willing to say that it's 20 percent this, 30 percent that.

I think in Mr. Spangler's case there's a heavy enough smoking history that Dr. Rasmussen said he thinks more of his total pulmonary disability is from smoking disease than from asbestos. He's fairly substantially impaired.

I think Dr. Gaziano will probably say he can't say. It's moderately severe and he can't sort it out. I don't think there's going to be any expert testimony by a doctor saying it's X percent this, X percent that.

I guess the disagreement between the parties is more a function of procedurally how do you go about [243] the notion that the jury's to compensate these folks for asbestos disease and not smoking disease. I don't think there's really any disagreement on that.

It's how do you go about it. I guess the caviat [sic] is I think if you read the *Rogers* case, if the jury were to find that the pulmonary disability is an injury that totally can't be separated out at all and that the railroad's conduct was a substantial contributing factor—not a substantial contributing factor. Contributed however slightly under the FELA standard or statutorily or in whole or in part, is how it reads. Then in the absence of contributory fault I believe it would be 100 percent.

If it is an injury that can't be—that you can't sort out between the asbestos and the smoking and there's no contributory fault, it's 100 percent. I do believe that.

MR. ADKINS: Judge, it's interesting to me, just since we're talking about this is that we're saying the railroads are

negligent because they failed to warn about the dangers of asbestos. There have been warnings on cigarette packs, I think, since about 1968, maybe even earlier, that warns everybody of all the problems.

[244] Now, how can we sit here and say that without warning on there that anybody that smokes that and has a disease process from that is not at least contributorily negligent?

Now, they may not be totally at fault for it because everything else that's involved in that, but to say that, you know, on one hand you're saying to the railroad you didn't put a warning. You didn't tell these men that exposure to asbestos would cause lung disease.

Yet, there's a warning right here with the cigarette in their hand on the pack saying it could cause emphysema. It can cause, you know, low birth rate for women, et cetera, et cetera, et cetera, and to say that that at least is not negligence or contributory negligence on their part, I don't understand how we can say that.

THE COURT: Well, you could say that if you ultimately tell the jury that they don't compensate him for any of the smoking related injury.

MR. ADKINS: Okay, we're talking about the same thing.

THE COURT: Well, I'm not sure we are and [245] the reason is—I mean, the reason why we get—why this is a confusing issue is because we've got different injuries to the same worker. If we're talking about somebody that cut a leg off and a hand off, that's a lot easier to deal with.

In this particular case, because there's so much—a doctor can't just go down to the cellular level and tell you what percentage of the lung is damaged from smoking and what percentage of it is done—damaged from asbestos, but basically that would probably be the best way to approach it.

So it isn't a question of fault, it's a question to the extent to which damage is caused by one or the other.

Now, I just don't know how we deal with it.

MR. ADKINS: Well, we've done this, Judge, in hearing loss cases, for example. All the time in hearing loss cases you have hearing loss caused by noise.

You have hearing loss caused by (inaudible), you have hearing loss caused by any number of things, and the jury hears that. And then they're instructed, then, to find, in other words, again, the employer, the railroad, is only responsible for the noise induced part [246] of that.

Now, the doctors don't come in and say it's, you know, 10 percent (inaudible), it's 20 percent noise at work it's 20 percent running a power saw at home. That kind of thing.

The jury hears all the evidence and based on that they go out and make a finding as to what, I mean, juries do that all the time. It's not—it doesn't have to be a precise thing for them in order for them to do it.

It's the same thing with the smoking or with whatever else is contributing to, excluding asbestos, is contributing to the condition that the person has in his lungs. It could be smoking.

It could be pneumonia. It could be a lot of things. And if the railroad didn't cause any of those things all I'm saying is we're not responsible to compensate that individual for it.

To the extent that we caused damage to his lungs from exposure to asbestos, if the jury finds us negligent, we're responsible. There's no issue on that. We're not contending that there is, but that's the whole, and how you do it is, I guess, is really what [247] we're maybe sort of talking about here, how we handle that with the jury.

THE COURT: Yeah, I think that's probably correct.

MR. RION: Judge, I've got to discount one—sort of one parting notion here that we took up. It goes back to this comparative fault issue.

If you take a lung cancer case let's say the manufacturing context—or let's say the gentleman quit smoking in 1965, so there's no question of comparative fault, and he has a lung cancer synergistically caused by asbestos and smoking. It's not the whole cause, but it's a substantial contributing factor. It meets the legal standard, whatever that might be.

I think in those cases fairly clearly because you can't apportion out some relative contribution and because there's no comparative fault, if my Plaintiff proves his causation he's entitled to 100 percent of his damages under the Joint Several Liability Concept of West Virginia law.

I would say if you read the *Rogers* case, and I'm going to ask you to just read *Rogers* and read *Dale* and I think you'll see that they're—I just think [248] they're inconsistent unless you've got separate injuries.

But, I mean, so if you've got a unified single injury that's simply can't be viewed separately, then if the railroad's conduct meets the legal standard and contributes, we get 100 percent of our loss in the absence of proof of comparative—of contributory fault.

Although, again, I mean, the obvious thing is if, you know, if I get in a car wreck and hurt my arm and then get in a train wreck and hurt my leg, the railroad doesn't have to pay for the arm.

MR. ADKINS: And I don't have to pay for the part of the arm that was damaged as a result of the first wreck. I'm not responsible for the aggravation of the preexisting condition, not for the preexisting condition. So under his—under his

example there, clearly I'm only responsible for the part of the arm that I additionally injured.

The preexisting part I'm not responsible for.

THE COURT: Let me look at the cases and I'll tell you before we get started the first thing in

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TRIAL TRANSCRIPT
April 15, 1998

Brody Testimony

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[71] and Blood Institute, the National Institute of Environmental Health Sciences, and the National Institute of Allergy and Infectious Disease also support my work.

Q And you're doing research primarily on what subject?

A My work is to try to understand how inhaled particles, like asbestos, for example, cause scar tissue in the lung and cause cancer.

Q What is the ultimate goal of that research?

A Well, all of this research that's funded by the National Institutes of Health, the goal is to develop an understanding of the disease so it can be treated. So, hopefully, it can be blocked, at least, help the individual who's inflicted with the disease.

Q Currently, is there an effective treatment for asbestosis?

A There is not.

Q And—but, you're one of the scientific researchers who's trying to find a cure?

A That's correct.

Q Are you a medical doctor or are you a Ph.D. doctor?

* * * *

[98] gas exchange region of the lung.

Q Wait a minute, I've got something I want to ask you, the smaller fibers that can actually get into the lung?

A Right.

Q Are they visible to the naked eye?

A No, not at all.

Q So, the fibers that actually get in your lung and do the damage and cause the scarring are not visible to the naked eye?

A That's correct.

Q Okay.

A But they add to this dusty atmosphere, though. If we get enough small fibers kind of backing up on one another they can refract light and add to what looks like a dusty environment, but the individual particles, if you can see them, they're not (inaudible), but if it's asbestos, that means that if there are particles that you can see, like this (indicating), then that means there are thousands of them.

Q So, there'll be evidence later in the trial that a gentleman named Dr. Meriwether wrote, way back in the 1930's, that if asbestos—let's just stick with asbestos, that if asbestos is in a concentration in [99] the air where you can see dust in the air, then, in his words, the invisible particle must be in dangerous concentration. Is that still true in modern science?

A That's exactly what I'm saying. That's correct.

Q Because Dr. Meriwether said that in 1938. In your opinion, based on today's state of the art science, that would still be true?

A That is correct.

Q Okay.

A So, the next slide, then, I'm going to show you what happens when an aerosol of this dust is inhaled. And so, here, for now, we're going back to the lung, and you recognize where we are now because you're all experts of the microanatomy of the lung. So, here we are at the end of the terminal bronchial where it opens into the gas exchange area and all these little air spaces are, and in the next slide I'm going to show you this area of the lung right here (indicating) immediately after that hour of exposure.

So, we're going to focus in right here (indicating) and now you can see the fibers. You see here's a lung (indicating) and then one's sticking up like this (indicating). There's a curly one right here

* * * *

[109] A Right, well, this is what we call—or what the doctor's call abnormalities of gas diffusion, where a diffusing capacity becomes compromised, and that means that—it simply means that you cannot move oxygen and carbon dioxide as efficiently through an area that has scar tissue in it as you can under normal conditions.

Q Once the lung becomes compromised, or injured, from scar tissue in that area—

A Yes.

Q —is there anyway to reverse that process, once it becomes sufficiently compromised that you have detectable abnormalities and gas exchange, clinically, is there anyway to reverse or cure that process today?

A Not that I know of, no. I mean, the cells that are living here, actually, you can see them right here (indicating), they live in this connective tissue space. They keep the lungs with a very normal balance of connective tissue.

They're called fibroblast, F-I-B-R-O-B-L-A-S-T. The fibroblast makes the connective tissue on your skin, or your liver, or your lungs. It's the same cell, and it's—and when it [110] confronts asbestos it makes scar tissue.

Just how depends on how much asbestos you're getting into. Now, you remember, the macrophages was supposed to have been here to clean up this mess, and they try to do that as contact out on the surface of the lung, and I show you one, two, three, four, five macrophages and some asbestos coming down here. They're sharing asbestos fibers with one another. So, they've come—they've actually—in my laboratory we've discovered the signal that calls the macrophages into find the asbestos fibers.

It's a chemical signal that they use to find the fiber, and they pick them up and they do clear off large numbers of them, but in an individual, an animal or a human, that gets too many fibers, they're not able to clean them off sufficiently to prevent disease.

Okay, I'm going to talk about lung injury and then what happens in people in the next few minutes.

Okay, so, I bring us back down, now, to the lung where that you can recognize. Remember, here the airways and here the gas exchange area where I just showed you the asbestos fibers land. So, if these walls, these very thin walls here (indicating) get thickened with scar tissue, the lung gets stiff, and if

* * * *

[115] here's the tube right here (indicating).

Instead of the walls being absolutely normal like this (indicating) they have the scar tissue, and the scar tissue runs all the way down the walls near these ducts (indicating), you can see. It should look like this (indicating), instead it looks like this (indicating).

Okay, now, at the ends of all of these airways you see these scars coming out from the asbestos. Now, does this animal—is this animal going to be short of breath? No. Is this animal going to come to the clinic? No. If I kept exposing him these scars would eventually extend out into the rest of the lung and he would have diffuse interstitial fibrosis asbestosis.

Q That's a—this is a good point to ask this question. In this understanding of this area, Dr. Brody, in a human, how much of the lung has to be damaged by this scarring process before it typically begins to show up on chest x-ray at the clinic?

A I understand that about a third of the lung needs to be scarred like this (indicating) before you can actually see it on an x-ray.

Q So, you may have ten or twenty percent of your lung that's already affected by asbestos and [116] there would be no effect on x-ray?

A That's correct. You wouldn't be able to see it. You'd have to actually open the lung and take a section out like this

(indicating) with cytology and look at it to know that there was anything going on. That's right.

I mean, the point here is that what is in this scar, this pink stuff back here is scar tissue (indicating), it's connective tissue. That's what this pink material is back here. The little purple dots are the fibroblasts that make the connective tissue, and the macrophages.

Here's the macrophage right here (indicating). Here are more macrophages (indicating) that are coming in and trying to clean this out. There are also asbestos fibers imbedded in this tissue that remain in there. I need the electron microscope to show you, but we've published all that—we've shown that.

We've shown that. So, this is just—this is from a single hour. Now, if you keep it, as I said, keep exposing, then the scar is spread out, and let me show you, then, what it looks like in a person who's been exposed continuously over time, so—

Q This is human lung here (indicating)?

* * * *

[118] Here's the airspace (indicating). Here's the thin normal wall over here (indicating).

Here's another airspace (indicating), and here's a thick wall (indicating), and just like I asked in the rat, what's in this scar? Now, I can actually make the diagnosis of asbestosis in this person by answering what's in this scar?

Well, first of all, I know the history. I told you his history that he was exposed to asbestos. He has scar tissue in the lungs. Do you see this pink material back here (indicating)? This is all scar tissue. He has asbestos fibers in here (indicating).

Do you see this right here (indicating)? This is called an asbestos body. There's another one right here (indicating).

These are all microfibers and fiberglass that made connective tissue. This person has asbestosis.

Q Now, can smoking cause fibrosis in the lungs that you would get confused with asbestosis?

A No, certainly not. What, actually, smoking causes a very different pattern. Smoking can give you some scars at the ends of these airways but they don't become diffuse out into the lung. In fact, what happens is, the lung tissue actually breaks down [119] out here in smokers rather than getting scarred.

Q That's a different pattern?

A It's a different pattern, that's correct. Okay, so, I've made the diagnosis of asbestosis in this person. I have a one final summary slide that explains just what happened now. So, here's a typical medical textbook illustration of asbestosis.

So, here's a person that's been exposed for a long period of time. Here's the whole lung, as you can see, and then there's this white material infiltrating the lung (indicating). This is scar tissue, and if I were to take a little piece of this tissue out and go backwards from the way I just was, you would see it like this (indicating), and if I went farther back, you would see the electron micrographs of it so you'd know exactly what the lung looks like; and this person, then, has the scar tissue infiltrating the lung, and he has what's called the stiff lung. He also has scarring of the pleura.

Q Medically, the doctors use a different term for this scarring in the pleura versus this scarring on the inside the lungs?

A Right. This scarring on the inside of the lung, if it's caused by asbestos, is asbestosis. If [120] you have scarring out here in the pleura it's generally called pleural fibrosis, and if it's circumscribed and just—actually, you can see it over here on the surface of the lung (indicating), following the pattern of the ribs, it's called pleural plaque.

There's a plaque. It's a circumscribed area of scarring, and that's what's shown over here (indicating), and this is a more diffuse pattern and this is a plaque.

Q Now, we can separate asbestosis scarring inside the lung and then different asbestos pleural changes on the lining of the lung?

A Yeah. You can separate them anatomically, but the process is the same. I mean, it's still a result of injury. Scar results from injury. Okay, and then, finally, this is what the lung actually looks like in a worker (indicating).

Here's that scar tissue you see as infiltrating the lung (indicating). Here's a pleural thickening right here (indi cating), and this individual's lung would surely cause a lung to be stiff.

Q Let me ask you this, Dr. Brody, can—can you have a worker who works around asbestos and breaths the asbestos dust for, say, ten or fifteen [121] years, and that worker may retire and have a normal chest x-ray?

A Sure, it's possible.

Q And he later developed scarring that's visible on chest x-ray, even though he's retired and doesn't have any changes showing up when he retires?

A Right, that's called progression. That means the disease gets worse even after exposure has stopped.

Q How can that happen that he develops more scarring, even after he's retired and no longer works around asbestos, how can that be?

A The reason is because there are asbestos fibers retained in this connective tissue plain of the lung, and as long as there are asbestos fibers in that plain they will continue to cause a reaction that can cause the disease itself. It doesn't happen in everybody, certainly, but it has been documented in a number of workers.

Q When we say—what's the medical term for the fact that somebody can be exposed to asbestos for decades and yet it may not show up on chest x-ray until ten years after they retire?

A That's called latency, and asbestosis [122] has a—you have a latency of anywhere from ten to fifty years. It really just depends on how much the person's been exposed to and their natural—their idiosyncrasy, their susceptibility.

Q Does that pretty much take care of asbestosis?

A Right.

Q Have you done any research, Dr. Brody, on the question of how asbestos can cause cancer?

A Yes, I have.

Q Have you done research on whether asbestos causes cancer?

A No. When I started my work that was established, and as I've done here, more interested in the process rather than whether or not it causes it.

Q My understanding, when you came on the picture as a medical researcher, there was no need to look at whether asbestos caused cancer because everybody understood that?

A That's correct, but it doesn't mean all the questions were answered. I mean, there is epidemiology to do, you have to know how much, but whether or not it causes it is not my problem.

Q And you are looking at the precise

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[132] A That's correct.

Q Can—we sort of looked at the mechanism by which that happens. Dr. Brody, you mentioned when you began doing this research it was established that asbestos did, in fact, cause cancer in humans. Are you familiar with the human epidemiology on the cancer risk, or persons who have the disease, asbestosis?

A Yes, I've seen that literature.

Q Let's—maybe, we can turn the lights on and—

A This one up here.

Q Yes, sir. Dr. Brody, I'm going to write up here (indicating) the two major forms of cancer caused by asbestos that we've discussed, mesothelioma and lung cancer, and in the studies you've reviewed, Dr. Brody, for people who've been diagnosed with the disease—excuse me, asbestosis, what is the percentage of deaths attributable to mesothelioma in the mortality studies?

A Mesothelioma?

Q Yes, sir.

A I've seen around ten percent in a couple of different studies. So that means that ten percent of [133] the people who have the disease, asbestosis, have died of mesothelioma.

Q Among asbestosis patients who are smokers, or former smokers, what is the lung cancer rate, first of all, mesothelioma, smoking has nothing to do with the risk, correct?

A That's right.

Q That's just asbestos. In a lung cancer it's a combination of smoking and asbestos?

A That's correct.

Q Fair enough. On—I've got a couple of the studies—or two of the studies, Doctor, that you have reviewed in this area. Does that include the studies by Mr.—Dr. Coots and Dr. Berry on mortality of workers diagnosed by a pneumoconiosis panel?

A I think I've seen those.

Q Take a look and see if these are two of them.

A Right, the Coot study is from 1987 which is relatively recent in this field, and the other one is from Jeffrey Berry. Actually, Jeffrey Berry was the person I worked with when I first went to Wales and the United Kingdom.

That's where he's from. He's published this [134] in the *British Journal of Industrial Medicine* in 1981, and I believe this paper showed a similar kind of percent.

Q Let's do both of them. On mesothelioma what did Dr. Coots show?

A About ten percent.

Q Ten percent, and what did Dr. Berry show?

A I believe it was quite close. I think it was nine, ten percent. Something like that.

Q Do you got the—?

A I'm looking. Yes, well, here he says "increased with percentage of disability". He doesn't name the exact percent but he says it's increased.

Coots actually gives ten percent as a number.

Q All right, on lung cancer, Coots gives what percent?

A About thirty-nine percent.

MR. ADKINS: Is that with—excuse me, is that with smoking, Doctor?

THE WITNESS: Yes.

BY MR. RION:

Q In individuals who are smokers, Dr. Brody, who were not asbestosis patients, do you see [135] anything close to the forty percent lung cancer rates in smokers who do not have asbestosis?

A No, I'm sure it's much less than that.

Q Do we have a figure on what Dr. Berry found for lung cancer?

A Yes, it was actually the same. I don't know what the standard deviations were, but, again, it was about thirty-nine percent.

Q Thirty-nine percent. That's a pretty consistent result, though?

A That's right.

Q Again, these are—the lung cancer risks were dealing with asbestosis patients who are smokers?

A That's my understanding.

Q Well, if you combine these two risks, the risk of either mesothelioma or lung cancer, combined, approaches fifty percent, although it's not quite that?

A That's right.

Q That's not just with anybody exposed to asbestos, that's for those who have the disease asbestosis?

A That's right, meaning they've had the [136] highest kinds of exposure.

Q In your opinion, are those who are exposed but do not have the disease asbestosis also have an increased risk of both of these diseases?

A Well, they do, quite clearly, have an increased risk. It doesn't reach these levels but it does—they certainly have an increased risk.

Q Dr. Brody, when you leave Tulane and travel like this to testify in Court do you charge for your time?

A Certainly.

Q And what's your hourly rate for this type work?

A Three hundred dollars per hour.

Q Have you testified in Court before regarding your asbestos research?

A Yes, I have.

Q Do you know how many times?

A Oh, it's something—maybe a dozen times a year. Something like that.

Q Has that been, on most occasions, at the request of lawyers who represent victims?

A Most of the time, yes.

Q The first time you ever testified in a

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[147] background, is what we're talking about. The background of people who are not occupationally exposed.

Q Well, could people that are not occupationally exposed have more than a million?

A It's possible but a million seems to be about the upper limit that's been established.

Q Okay, and, how many grams of lung do we have; how much would a lung weigh?

A Well, lungs weigh about four pounds. There's four hundred and fifty four grams in a pound, so about four times what your—

Q So we'd have probably over a trillion fibers in our lungs? And if I understand you right on your direct examination, then, from what Mr. Rion asked you, then, a trillion fibers if, I guess, of asbestos, then, would fit into a thimble, is that what you're saying?

A Easily.

Q And, the people—all of us that are not occupationally exposed to asbestos are normally healthy individuals, aren't they?

A I hope so.

Q You're not saying that everyone occupationally exposed to asbestos fibers is going to [148] get asbestosis?

A Certainly not.

Q And it's not gonna make them sick and it's not going to make them go to a doctor, necessarily?

A Not necessarily, no.

Q People that are occupationally exposed, it is variable as to how they're exposed, some people might be exposed heavily, some might be exposed by lightly, and sort of even in the same environment; isn't that true?

A That's true.

Q And you're not saying that a single asbestos fiber in the lungs is going to cause asbestosis, are you?

A Not at all.

Q You cannot testify to a reasonable degree of medical—scientific certainty that any particular person exposed to asbestos will develop either—any of these cancers or asbestos that you've talked about?

A I cannot say specifically, no.

Q Also, in terms of progression, asbestosis does not always progress, does it?

A That's correct.

* * * *

[150] A. Now, you've got the question right, you left out smoking in the first one. Yes.

Q I'm sorry.

A In workers who are exposed to asbestos who smoke, then cancer—

Q My point is, though, if you are a nonsmoker and you're exposed to asbestos occupationally, your risk of lung cancer is less than two; isn't it?

A In some cases—it's small. I'm not sure, less than two, but some say five percent, but certainly it's significantly less than the number you see there.

Q So it would appear here that that confounder of the problem here is smoking; is that—

A The point is that cigarette use, plus asbestos exposure causes a synergy. That means, you don't just add to the affect, the affect is multiplied. So, you take the affect of cigarette use along, which causes along a thirty-fold increase, plus asbestos, you don't get just an increase of that small asbestos in the lung, you get this multiplicative effect which takes it fifty-fold increase.

Q Right. And that fifty-fold increase is caused by the fact that the person is smoking?

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TRIAL TRANSCRIPT
April 15, 1998

Vance Testimony

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[169] THEREUPON CAME,

CLIFFORD VANCE

who, having been first duly sworn according to law, testified as follows

DIRECT EXAMINATION

BY MR. BOITER:

Q Good afternoon, Mr. Vance, how are you?
A All right.
Q Okay. Are you a little nervous about testifying?
A Probably.
Q Have you actually ever testified in a Court of Law before?
A No.
Q Well, I'm going let you—the first thing I'm going to get you to do, if you don't mind, is tell the jury your full name.
A Clifford Oscar Vance.
Q Are you married, Mr. Vance?
A Yes, sir.
Q What is s your wife's name?
A Edra.

THE COURT: If you would, please, sir, why don't you pull that microphone down just a little bit [170] closer?

THE WITNESS: All righty. I don't talk too loud anyway.

THE COURT: Can you hear okay, folks? Go ahead.

BY MR. BOITER:

Q How long have the two of you been married?

A I believe it's fifty-six years, this November—coming November.
Q Is Mrs. Vance actually in court with you today?
A No, sir.
Q Is she just physically unable to be here?
A Well, I can't say she wouldn't be able to be here, but it would disturb the way she takes her medication and stuff, and it would be hard on her.
Q Did the two of you have any children?
A Yes, sir. We have twin boys and a daughter.
Q I believe you told me last night it was kind of a surprise when the two of you had twins?
A Yes, sir. My granddaughter's got twins [171] already.
Q Where do you and your wife live?
A We live in between Bluefield and Princeton, in the Glenwood area.
Q And about how long have you-all lived there?
A About three years this past December.
Q Where did you live before that?
A We lived down next to (inaudible) address, but we lived on about six acres.
Q Would you tell the members of the jury how far you went in school?
A I completed the ninth grade.
Q Where did you actually go to school?
A Iaeger, West Virginia.
Q Is that where you were born?
A Yes, sir.
Q How old are you, sir?
A Seventy-seven this past February.
Q Were you ever in the military?
A No, sir.
Q Did you ever volunteer for the military and were turned down?
A Yes, sir.
[172] Q Why do you think you were turned down?

A Well, they had a lot of things on my report. I have a valvular heart disease, and some—I don't know what all they did have on it, but, anyhow, what it amounted to was that I only weighed 110 pounds and was six foot, one inches tall.

Q Have you ever been diagnosed with a heart problem since then?

A No, sir.

Q One hundred and ten pounds, and six feet one?

A Six feet one, with bright red hair.

Q Growing up, did you ever smoke?

A Yes, sir.

Q When did you stop smoking?

A I would say in the middle of the late '30s.

Q You stopped smoking in '85 and haven't smoked since, right?

A Yes, sir.

Q Did you ever try to quit prior to 1985?

A Yes, sir.

Q You just weren't successful until '85?

A That's correct.

[173] Q Tell the jury when it was that you first started working for Norfolk and Western Railroad.

A I started to work for Norfolk and Western Railroad on the 4th day of November, 1942.

Q What was the date when you graduated from high school?

A I didn't graduate.

Q Well, ninth grade, I'm sorry.

A Around, I'd say '35.

Q What did you do between '35 and '42 when you went to work for the railroad?

A I drove a coal truck a little bit. House coal, back then, was very popular, a two ton of coal. So, I drove a small dump truck and just worked in a grocery store or whatever I could find just to make an honest living.

Q Just sort of odd job type stuff during that period of time?

A Yes, just whatever somebody wanted.

Q Were there any jobs in that period of time that you believe you worked where you would've been exposed to asbestos?

A No.

Q So you started to work at the railroad [174] in '42; how long did you work for them, when did you retire?

A I retired—I had, actually, almost thirty-three years, and I retired April 3, in '81. I was cut off in the 70s.

Q So you think you worked from '42 to '81 but you were cut off for about seven years in between?

A Yes.

Q When you went to work at the railroad in 1942, what shop facility did you start working in?

A I started in the pump house. They would pump water up to the tank, and mixing the chemicals to treat it, and that's about all I did for the first couple of months.

Q That probably wasn't a real good question. Let me ask it to you this way, what railroad yard did you actually start working in?

A Iaeger.

Q Okay. So you went to work in Iaeger in the pump house?

A Yes, sir.

Q How long did you actually work in the pump house when you started at Iaeger?

A Oh, a couple of months.

[175] Q What was the mixing of the chemicals that you were doing actually for, what were you actually doing?

A They had chemicals that was to treat the water and keep it from foaming so bad, and keep down corrosion, and I can't tell you what all that they were. But they had a big old tub with a peddle in it and you added so much of this, that

and the other, to get your mixture just right so it could be pumped in with the water.

Q While you were on the job at the pump house for those two weeks, do you know or do you believe you were exposed to any asbestos products?

A I don't think so. Not that I know of.

Q After you left the pump house, where did you go from there?

A I went over to the shop, which is all the same place, but just went across the tracks.

Q Is that still at Iaeger?

A Yes, sir.

Q Was it in the roundhouse, was there more than one shop or was it just a roundhouse, or what?

A What we call a running track which inspected the engines, and we had what you call the dead [176] track of two tracks in the roundhouse, and my job at that time was to clean up the roundhouse. If they had to remove a jacket on the steam engine or something then they'd have asbestos to clean up; brake shoes and whatever.

Q Were they parallel lines that just run up to a long straight building; is that how it worked?

A It was more or less a roundhouse with a machine shop in part of it, and it just—it just held one steam engine. It was built for one steam engine on two tracks.

Q One on each track?

A Yeah, one on each track.

Q About how far apart were the two tracks?

A Possibly twenty or twenty-five feet, something like that.

Q You said one was a running track and one was a dead track. Explain to the jury what the difference is between a running track and a dead track.

A A running track is where we service the steam engines from each stage of work, and it would be inspected and the brake shoes, and see that there's nothing seriously wrong with

them—if they was able to make another trip. And the dead track was where we [177] knocked the fire out of the engines when they came in to do a monthly inspection, or something had happened that you had to wash them out.

They had to be washed out once a month and checked out real good, the boilers and leaks repaired—minor leaks repaired, just minor problems. In the shop where I worked, we didn't do any heavy work. Usually the minor leaks was repaired. Just minor problems was repaired there, usually in one day. Sometimes we'd run into two days.

Q During the period of time when you were a laborer in the roundhouse, what was a typical day like; can you describe for the jury sort of what you'd do during the course of a day?

A I used to—after I came to the first shift, I usually went out and serviced the passengers and coaches. We had a passenger train up until '49. Cleaned them out inside, just the normal cleaned them out, did what I could for about an hour. Iced them up, the coolers. At that time you used ice in the coolers, you didn't have electric ice machines. Get them ready for a run with passengers on them.

Q What would you do after that? How long would it take you to do that?

[178] A Between that, and I took care of the icehouse most of the time, which they issued ice in small quantities, and then I would—after that, after the train left I would work in the roundhouse, cleaning it up.

Q About what time of the day would you be done with the work trying to get the passenger train ready to leave?

A Oh, 9:30, 10:00.

Q After that you'd go out in the roundhouse?

A Yes, sir.

Q Tell the jury what was going on out in the roundhouse and what type of activities you, yourself, did out in the roundhouse during the course of a day?

A I cleaned up and picked up the brake shoes, mainly what dust or asbestos or whatever was spilled in there in the roundhouse, I cleaned it up. And they wanted the roundhouse cleaned every day on the first shift, and whatever was there was just what I had to clean up, put the tools back in the proper place.

Q Did you ever see the steam locomotives that were on the dead track with their boiler jackets [179] off of them?

A Oh, yes, not completely, now, but certain sections.

Q I'd like to show you, if I could, and it might be easier if you come around so I can sort of let you look at them, I want to show you this photograph and ask you if you sort of recognize what's going on there?

A Oh, yes.

Q Would you tell the jury a little bit about what's happening in this photograph?

A If you've got a leakage under here (indicating), but if this engine is leaking steam or water—hot water, whatever, under the jacket here, they've got to remove the jacket, pull this stuff off, and the boilermakers will dry those leaks up and then it has to be pumped up and put back on there.

Q Did you actually see this process taking place where they would wire the asbestos on?

A I would haul this stuff in for them. I hauled it in the roundhouse for them.

THE COURT: If you could keep your voice up just a little bit.

BY MR. BOITER:

Q What were you saying?

[180] A I hauled that in the roundhouse for them and I, also, mixed the mud.

Q The mud?

A The mud.

Q You talked about hauling these blocks into the roundhouse. Where would you actually go to get these asbestos blocks?

A Well, it wasn't much further than, maybe, here to the door back there, but you crossed two sets of tracks—one set of tracks, excuse me.

Q And where were they—were they stored in a building, how were they stored?

A They were stored in something like a four-by-six building that were stacked, the long pieces, but your powder mixture was in a barrel, and the building was just usually pretty full of asbestos.

Q What would you do in terms of bringing the blocks to the folks, I mean, how did you transport them from one place to the other in the shops?

A Wheelbarrow.

Q Who were you actually taking these to?

A I was taking them to the boilermakers.

Q What was the boilermakers doing with them?

[181] A They were the ones who put them back on there and fixes your jacket back to it's original position.

Q You talked about, also, one of your responsibilities was getting the asbestos to the mud. Was that kept in the same place?

A Yes, sir.

Q How did you get that material?

A We took a shovel and digged down in there and poured it out in the wheelbarrow.

Q Did you do any of the cleanup work after the guys were through doing what they were doing?

A Yes, sir.

Q What, specifically, did you do to help with the cleanup?

A We either swept it up and rolled it out in a wheelbarrow, which was most likely what we did, then later

on in the later part of it they did go wet that down a little bit to do that.

Q How long were you actually a laborer in the roundhouse doing that type of work?

A I went to work August 1 of 1945.

Q So, from '42 to '45, essentially, you were doing this labor work?

[182] A Labor work.

Q When you were actually doing the sweeping of the asbestos that had been thrown off the boilers, did that create dust in the air?

A Yes, sir.

Q Is that dust that you would have breathed if you knew you were breathing it?

A Oh, yes, you would breath it.

Q In the process of mixing the loose asbestos up to make a mud with, was that a dusty process?

A Yes, sir, it was.

Q Can you sort of describe in your words so that the jury can understand just how sort dusty it was?

A It was dusty enough. If you poured water on it with a hose it would make dust until it all got wet.

Q Was it actually dust that you could see physically in the air?

A Oh, yeah.

Q About when the locomotives came in and they took jackets, or part of the jackets off of them to do their repair work, did that create dust in the air?

[183] A Yes, sir. A good bit of it.

Q Describe for the jury what happened once that jacket came off.

A They'd take the jacket off—of course the metal come off first, and then they'd just rake it off the best way they can.

Q Looking at this picture, what if they were removing the asbestos off of this particular locomotive, would they

hand it to somebody to put down on the ground or would it just fall down to the ground, or what happened to it?

A Pull it off and just fall down to the ground.

Q Did it create dust when it hit the floor?

A Yes, sir.

Q A little bit or a lot?

A A lot.

MR. ADKINS: Your Honor, just for the record, could we kind of mark those so when we're talking about this picture, we'll know what we're talking about?

THE COURT: Yeah.

MR. ADKINS: Otherwise if the record only [184] reads it, we won't know what we're talking about.

THE COURT: Yeah, right. I agree.

MR. BOITER: The first photograph I showed, which is the workers actually putting asbestos on will be 17RR-1. The second picture we talked about was 17RR-2.

THE COURT: Okay. They'll be so identified.

(WHEREUPON, the photographs referred to were marked for identification as 17RR-1 and 17RR-2.)

BY MR. BOITER:

Q You indicated the next job you had was that of a hostler?

A Yes, sir.

Q Explain—well, first off, was that still at Iaeger?

A Yes, sir.

Q Explain to the jury what a hostler did.

A A hostler came on when the steam engine came in the ash pit, which was the first place they came to after they'd been on their run; and the hostler job was to spot that engine, and we had a laborer with us and we cleaned the fires. Now, not all the time. Not [185] all the time. The hostlers didn't all

the time clean the fires. A lot of times the laborers did, but most of the time the hostlers went out there and one laborer.

They shook the grate. One of them shook the grate and the others blowed the ash bins and then we sanded the boxes. We sanded both boxes. The steam engines had two boxes on them and we had just one sand spout. So we'd sand the front one and then we'd move it down and sand the other box, and then we'd bring that engine on down to the wash rack with hot water and wash the grease off of them that was created through the day; and then we'd take them to the coal wharf and put a little coal on them.

They went in and went through the roundhouse for the machinists, pipe fitters, or whatever, to inspect them. And then we took them and watered them, filled the water tanks full, filled the coal bins full, and prepared them.

If they were going out the next morning we'd prepare them till they would set and still have steam in them and get them hot when the morning came in time for the run. And they was two of us that did that, a hostler and a fire and water tender.

Q Okay. I don't want to leave the hostler [186] but I want to back up a second. I want to go back to the laborer.

A All right.

Q What was your work schedule during the period of time, the '42 to '45 time period, when you were a laborer there in the shop?

A I had a pretty good work schedule. I worked the day shift mostly.

Q How many days a week did you work there, we're talking '42 to '45 now?

A '42 to '45 we worked seven days a week.

Q How often would you get—working seven days a week, how often would you get a day off?

A Well, they was pretty good about that. If you worked, say, a month or six weeks, or something like that, they would

let you have the day off, and they was good about letting you have a day off in case of sickness or something like that. Why, the company at that time was real nice to us.

Q Okay. The activities you described earlier, the sweeping out of the asbestos, when the mud was being made, the work on the steam locomotives, is that something that was done the first thing everyday there in the shops?

[187] A They didn't pull jackets on all the engines that went through the inspection—the monthly inspection. They didn't do that. They had to have a bad leak or something, but you could say several times a month.

Q How often would you do the process of sweeping asbestos or mixing the mud or stuff like that, say, in a seven-day work week?

A Possibly, a couple of times. Maybe four times. You just don't know. It depends.

Q What would you do with, say, the old asbestos after you swept it up?

A We rolled it out in a wheelbarrow and dumped it over the bank—the river bank.

Q Say in a typical work week, how many days a week would you describe the shop as being a dusty environment to work in?

A Being dusty. In the shop I would say six days or something like that. Usually on the seventh day, or Sundays, we usually had the engines stored and had them bedded down. We had fire in them to get them ready to go again.

Q Going back to the next time period when you were a hostler, I believe that started in '45, how [188] many—what shift did you work at that point in time?

A I started out on the night shift.

Q How many hostlers were on the night shift with you?

A I was the only one.

Q You were the sole one?

A I was the hostler.

Q Is it fair to say, then, if a locomotive went into the shop and a locomotive came out of the shop on the night shift it was you who moved it in and moved it out?

A Right.

Q Were the same type of repairs, the same use of asbestos going on in the period of time when you were a hostler?

A Yes, sir.

Q It wasn't just somebody else who was sweeping the asbestos, it was you?

A That's right.

Q How long did you actually stay in that position as a hostler?

A I worked at Iaeger from 1945 with the exception of about three or four months there in '46. As a hostler until December, 1959.

[189] Q During that entire period of time, from '45 to '59, was N&W still using steam locomotives?

A Oh, yes.

Q They still had boilermakers taking the jackets off of their engines?

A Yes, sir. That's when I was put off.

Q During that entire period, asbestos was still being stripped of steam locomotives?

A Yes. It was practically the same work.

Q Would you have—as a hostler, would you have still been in the shops when the repair work was being done on the steam locomotive?

A Oh, yes, sir.

Q Do they still—was it still dusty from that '45 to '59 time period in the shop?

A At times. Yes, sir.

Q Do you believe you were personally breathing dust generated from asbestos products during that period of time when you were in the shop?

A I do. I didn't realize it at the time.

Q You didn't realize it was that dusty?

A I didn't realize the danger of asbestos.

Q What happened—you indicated you got laid off in 1959, what was—what sort of caused that?

[190] A I went back to a laborer in 1959 until June. I was actually cut off in June, 1960.

Q I'm sorry. When you worked the 1960 time period as a laborer, did you do the same things you had done as a laborer before?

A No, sir. There was very little work to do there during that period of time. They had the (inaudible) and they kept one machinist for a little while and they kept me as a laborer. I was the only one they had left, and we just—we just didn't do much. It was mostly just sweep out the diesels.

Q And eventually, you were laid off because they didn't need you once they went to diesel engines?

A True.

Q What did you do at that point in time, we're talking about roughly 1960?

A I did about anything I could to keep those boys and my daughter in school. I went into a filling station attendant for a little while, and I drove a big coal truck for a little while. I went to Michigan and worked at _____ Products for a little while, and then I was cut off up there; and I came back home and I don't remember exactly what I did, just [191] whatever I could find to make a little money.

Then I went back to Michigan again and I was in Michigan when they called me back on the railroad, '67 they called me back to Bluefield.

Q So you eventually went back to work at the railroad?

A Yes, sir.

Q What—when you went back to work for the railroad in '67 at Bluefield, what were you doing then?

A I went back as a hostler.

Q Did they still use asbestos up in Bluefield?

A They still had some asbestos there, and we had pipes that were wrapped in asbestos. I've been told that there was more asbestos than I thought they was in the diesel, but I didn't see it. But I had saw some dust from them.

Q Did they have stationary boilers up in Bluefield that had asbestos on them?

A Yes, sir.

Q When you talk about overhead pipes with asbestos, what are you talking about?

A I'm talking about from the boiler over [192] to the roundhouse, which was maybe four or five hundred foot from the boiler.

Q What sort of condition was those overhead steam pipes in?

A They was in fairly good shape, and they repaired some of them sometimes, but they had asbestos insulation on them.

Q What sort of process took place when they would repair them?

A Sir?

Q What type of process, physically, what did they do when they would repair one of those steam lines?

A They cleaned the old off and put the new on, but it was mostly outside.

Q Were the shop conditions up at Bluefield dusty?

A Dusty and smoky.

Q We're talking about a period of time when there were diesel locomotives there, right?

A Right.

Q So, I'm assuming that your—do you feel like your asbestos exposure at Bluefield was actually less than it was during the steam days?

[193] A Oh, yes, sir, but we had more dust, I believe.

Q When did you ultimately retire from the railroad, 1981 I believe you said?

A I retired the 1st day of April, 1989.

Q What type of retirement did you take in '89?

A I took a regular retirement.

Q During the entire period of time that you worked at the railroad, essentially starting in '42 up through your '81 time period, did anyone at the Norfolk and Western ever tell you about the hazards of asbestos?

A No, sir.

Q Did they ever have any safety meetings where they sat everybody down and said, we need to tell you about asbestos hazards and you need to be careful?

A Just the last little bit I worked they put—I said the last little bit, I don't really know, but we had hard hats and goggles. They made us wear that. If you wore your regular glasses you had to have shields on them to protect the eyes.

They finally did that on a count of the sand blowing and all that stuff.

[194] Q When did they give you hard hats and goggles?

A I'd say four or five years before I retired. I can't pinpoint that.

Q Before you retired did they ever sit you down and say, here's how you need to handle asbestos to make it safer?

A No.

Q Did they ever—did the railroad ever provide you with any type of mask or respirator to help protect you from the asbestos dust?

A No, sir.

Q Did they have any sort of asbestos safety program in place up until you retired?

A I don't really know. I was, like I said, the only thing that I received was the glasses and hard hat.

Q If they had one they never told you about it?

A No.

Q Did the railroad ever come to you and say, we'd like to examine you, we want to take a chest x-ray to see if you have any problems from the exposure to asbestos?

[195] A No, sir.

Q Did you ever see any warning signs anywhere around the shop posted about the hazards of asbestos?

A No, sir.

Q Did you ever see anybody come into the shop to try to take measurements to see how dusty the shop conditions were?

A No, sir.

Q Would you tell the jury what year you were diagnosed with asbestosis?

A '91.

Q In 1991?

A Yes, sir.

Q What's your understanding of what asbestosis is?

A From what I've been told it's a hardness of some portion of your lungs. It's kind of like a crust, and it affects your breathing ability.

Q How has this affected you, in terms of your breathing, in terms of your overall physical condition?

A If I exert myself any at all and I walk too fast, or going up a hill, or if I lift anything. It [196] just doesn't take much. I just can't breath. That's what it amounts to. I just feel like I'm gonna fall dead or something.

Q Is it that way everyday?

A No, sir. Some days it's a little better than others.

Q Good days and bad days?

A Huh?

Q Good days and bad days?

A Yes, sir. Good days and bad days with this breathing.

Q Are there any types of things that you can do that sort of make it a bad day, I mean, what's—what gives you problems?

A If you work on very small yard. I've got a seventy-by-eighty lot, and it only takes about twenty minutes to mow it, and if I happen to get in a hurry and mow it all at one time, I've got to set down and rest for a good while.

So, hurrying don't help me any at all. I'm better off to take my time.

Q Is that the way it was ten years ago, did that change since—

A No, that's changed a real good bit in [197] the last five to eight years.

Q What—tell the jury what you mean by it's changed a real good bit.

A Shortness of breath and not being able to do the things that you have been doing in the past without just getting plum out of air and having to set down and wait until you do feel like moving again. I seem to have strength but I don't have the air, and you just have to set and wait on it to catch up.

Q Has your yard always been that small?

A No.

Q How big did it used to be?

A Oh, I'd say a couple of acres.

Q When you had a couple of acres were you able to cut that lawn?

A I moved from Montcalm in '79. I lived there fifteen years, and when I moved down there I could take care of everything, the weed eating, the mowing, didn't bother me, but the reason I sold was because I couldn't keep it up.

I'd just—I'd get out there weed eating or doing something that needed to be done and it'd take all day to do anything. I have to do just a little bit and wait a while, and when it gets real hot it's bad. I [198] can't breathe.

Q When was it that you moved and sold to this smaller lot?

A December of '94.

Q You mentioned you had some grandkids, how old are your grandkids?

A I've got one boy twenty-seven, and I believe the youngest one is the girl and she's nineteen now.

Q Any great grandkids?

A Yes, sir.
Q How many of those?
A About seven.
Q Can you today do the same things you could do with the grandkids, the great grandkids ten years ago?
A No, sir.
Q Are there any other types of daily activities that sort of jump to mind, I used to do it this way and I used to do it that way?
A No, sir, I don't exert myself. I'm trying my best to stay off oxygen. I'm a person who doesn't like the doctors too well.
Q Besides your breathing problems I think [199] you've also got some arthritis problems?
A Yes, sir.
Q As the breathing has gotten worse, how do the two of those sort of work together?
A That's sort of hard to explain. The arthritis bothers me and my breathing makes me weak.
Q You also take some blood pressure medicine?
A Yes, sir.
Q Is your blood pressure under control?
A Yes, I have no problems with it.
Q You also take heart medication, I believe?
A Yes, sir.
Q Other than those problems, do you have any other significant medical problems?
A No, nothing I have to take regular. I take Pepsid when I need it. If I have a little indigestion problem, I take a Pepsid for that.
Q As a result of your knowledge that you have asbestosis and what you know about that, do you have any concerns that you might develop cancer due to your exposure to asbestos?
A Well, it makes me think, occasionally.

[200] Q Have you talked to anybody about the asbestos disease that you sort of confide in?
A Not too much because my wife has a nervous condition and I don't tell her too much about anything.
Q Do you try to sort of keep all that from your wife?
A Yes, sir.
Q In terms of your concerns about potentially developing cancer, what is your worst fear?
A Well, that I would have to leave her and the children; and the fact too, that she is so dependent on me. I can't get her to take over writing the checks or things like that. Her nerves are so bad she can hardly concentrate and that worries me a bit much.
Q Is there any question in your mind that during the period of your work with the N & W Railroad that you had extensive exposure to asbestos?
A No, there is no question I was.
Q Besides in the shop did you ever get any exposure out on the railroad line?
A Yes, sir, a good bit. Emergency firing and things like that. And there is times when a steam engine will come in and there will be just white stuff [201] all over everything and you have to get rid of that.

MR. BOITER: That's all the questions I have for you Mr. Vance. Just keep you [sic] seat because you'll have some questions from defense.

CROSS EXAMINATION

BY MR. ADKINS:

Q Good afternoon, Mr. Vance. I'll be very brief, I think. Just a couple of questions. It's more of an education for me and I hope you can endure it, too, because we're going back a little bit before my time, too.
A Yes, sir.

Q I wanted—you know, you talked about this shop there—was it in Iaeger? Is that where it was?

A Yes.

Q Iaeger wasn't a very big operation during that time, was it?

A Iaeger was pretty well steady, we had several mines running and at one time we had about twenty-six mines running.

Q What I'm talking about, though, is they didn't have a big back shop there where the [sic] overhauled the locomotives and that sort of thing.

[202] A No, sir.

Q So, what you're talking about there at Iaeger during the steam time was a small running repair kind of shop; isn't that right?

A You had the running repair on one track and you had the monthly inspection on the other side where you had to wash the boilers out, check for leaks.

Q Well, the only point I'm trying to make is, for example, it wasn't the kind of shop where you were taking the locomotive apart and putting it back together and fixing it; you didn't do that at Iaeger, did you?

A Oh, yeah, they took several—they removed the jackets—

Q I understand, I understand, but what I'm asking you is did they do the complete overhaul work there like they did, for example, at Princeton or at Bluefield?

A No, no.

Q That's what I thought., You talked about this stay bolt repair that you were doing. Was that something that was fairly common on a steam engine, a stay bolt would go bad?

A Oh, yeah.

[203] Q If a stay bolt went bad what happened on the steam engine? Did it leak or leak steam, water—what came out?

A I will explain it to you the best I can. I understand that you don't realize what it was.

Q No, I don't.

A A steam engine normally works from a two hundred, two-hundred-fifty pound (inaudible). When it came in the shop, we didn't keep any of the steam on it. Sometimes we get down to a hundred pounds of steam. We'd cool them off and then fire it back, heat it back and we'd create a leak.

Q Well, I guess what I was trying to establish was whether if the bad, it was a steam leak. Was that the problem? If you're out on the line and you have a steam leak, obviously, the engine is losing power, I assume, if it's losing steam; is that right?

A Well, sir, when they was real hot they wouldn't be leaking real bad, but the pressure would begin to drop as they begin to cool a little bit, it's real hard to keep a fire in them if it's leaking in a firebox.

Q Now, if it's leaking, it's leaking steam; is that right?

[204] A Steam and water.

Q And if it's leaking steam and water, and I realize this is not in a shop, this is an exhibit 17RR, these stay bolts they were replacing, that water, I take it, the steam would leak out, so this asbestos that they were removing off that engine, is would be wet; wouldn't it?

A Well, by the time they got it in the shop there and got the jacket off of it and everything, usually it was pretty dry, because you had to remove a bigger area than you had to repair.

Q Well, part of it was wet then; would that be fair?

A That would be fair.

Q And to me, and again I'm not a railroader, but to me running repair to me, sort of because you use running is sort of something that can be done quickly. Is that running repairs are as opposed to an overhaul where you are taking an engine in and you're going to do major kind of things to it; is that correct?

A Running repair was your daily inspection.

Q So, the engine was gonna turn around and go back out real quick in running repair?

[205] A Well, not necessarily, these are eight hour shifts.

Q Well, that's what I meant by real quick as opposed to a month or two months or however long it took to completely overhaul; is that fair?

A That's correct.

Q Now, you, as I understand it, were in this Iaeger shop, as a laborer just for two years; is that correct?

A No, I was a laborer from November the 4th in '45, I mean '42, until August the 1st in '45.

Q Okay, about three years then; is that right?

A And I went back for about four months after that.

Q Okay, I'm talking about the first time.

A Yes.

Q And the rest of the time, then, you worked as a hostler for the railroad; is that right?

A Yes.

Q And certainly in 1967, after you have the lay off of about nine years, I guess it was, you came back and when you came back then the steam engines were gone and you were a hostler for diesel locomotives; is [206] that right?

A Yes.

Q And is it true that a hostler for a diesel locomotive, basically, service that locomotive; is that part of his job?

A We didn't do as much servicing as we did movement of them, but we had laborers that fueled them and sanded them; and the machinists to do the brake shoes, the check the oil and water and everything in the diesels. And in the case of a running repair, you didn't do anything unless it was an emergency in Bluefield. And most of the time they just fueled them and sent them on their way.

Q And when you were, I take it then as a hostler, you were actually operating the diesel engine as an engineer. I

mean, the same thing the engineer did except you were doing it in the yard as opposed to out on the open line, basically, is that true?

A That's correct; in the shop and the yard.

Q So, from nineteen and sixty-seven until you retired in 1981, then basically, you operated a diesel engine; is that fair?

A They operated and separated them and put them together. That's where you created all of your [207] dust was taking them apart.

Say, that a consist would come into Bluefield of five little units, one of them was due in Roanoke and the other, we would take that one out that group and find another one to put in it's place.

Q And that would have been outside. In other words—

A That would be anywhere, in the house, anywhere.

Q Most of the time this consist would be, like you say, a group of engines, that would be a consist; right?

A That's right.

Q And part of your job, then, was to break this consist up and make sure the engines got to wherever they needed to go; is that fair?

A That's right. That's right. We took them apart and put them together.

[208] Q And that, basically, was done in the yard most of the time, occasionally might have been done inside.

A They put a—in the yard. In the yard that's where we'd add to or take away from the train.

Q But you, during that period of time from '67 till '81, you never actually worked on diesels, did you?

A I never worked on diesels at all.

Q That's my point, you didn't. So, you didn't repair them at all?

A No, we took them apart and put them together.

Q Okay, that's what I want to make sure the jury understands when you say you're taking them apart. When you say you were taking them apart, by taking them apart, you mean you disconnected where the couplers that attached them together?

A Right. You've got three or four airlines.

Q Yes, I understand, but what I'm saying is when you say you were taking them apart, I didn't want them to think you were taking the diesel apart. We're [209] taking engines and separating them in separate units.

A Yes.

Q You mentioned, you said something about—I'm not sure I caught it exactly, about a wet down that you all were doing, or something. What was that about, when you worked as a laborer there at Iaeger?

A Well, basically, nobody told us to do it, but we'd wet down when we could and get out of as much dust as we could.

Q So, you, all there on your own, if I understand you right, were wetting down the dust and so forth; is that right?

A Unless it was already there and it might have already been there for two days a before I could get to it before I swept it up.

Q Before you swept it up and moved it around you were wetting it down?

A Not all the time.

Q Sometimes you did that?

A Sometimes.

Q You indicated that you—how long did you smoke?

A It seemed to me like I did it about [210] forty-eight years.

Q And during that forty-eight years, how much did you smoke?

A

Q What kind of cigarettes did you smoke; do you recall?

A I smoked several different kinds.

Q Do you recall any one you liked more than the others?

A I can't recall.

Q Did any of your doctors ever tell you it might not be a good idea to smoke?

A No, sir.

Q They never told you that, advised you not to smoke?

A No.

Q I thought I something in your deposition about maybe 1978 or 1978 doctors had told you not to smoke. Does that jog your memory at all?

A I would say that probably the doctor I had at that time told me that it wasn't good to smoke.

Q Okay. When was the first time that you went to see a doctor because of breathing problems that [211] you were having; a breathing doctor, in other words? The first time you went to a doctor because of breathing problems.

A Ninety-one.

Q And how long had you had breathing problems before 1991?

A It's hard to say.

Q Is there any particular point in time when you associated the breathing problems with your work?

A Yes, when I went to the doctor.

Q My question to you was when was that, what was the date? Was that in '91, also?

A That was in '91.

Q So, that was the first time you went to the doctor because of breathing problems and that's when you learned, at least, from what the doctor said, and so forth, that some of them might have been associated with your work; is that right?

A That's true.

Q Did the doctor indicate that some of your problems might have been associated with your cigarette smoking?

[212] A No.

Q Didn't mention—did you tell the doctor that you were a smoker who smoked for forty-eight years?

A Yes, sir.

Q And he didn't say—who was the doctor you went to see? Do you remember his name? Is he in Charleston?

A No.

Q Where was it?

A I don't really know, I don't remember?

Q Now, you said you were—I want to ask you a couple of other questions. You also mentioned that your—I think in the deposition that we took that your father was also a smoker; is that correct?

A Yes.

Q Did he smoke when you were around him at home?

A Yes.

Q What about your mother, did she smoke?

A No, sir.

Q Did you have any brothers and sisters that were smokers at home?

A No, sir.

[213] Q You indicated—just one other question, Mr. Vance, you indicated that you fired, and by that I assume you meant you were a fireman on steam locomotives?

A I have assisted on firing; I didn't have a regular job doing it. During World War II, they run (inaudible) and they invited us to do it to take care of the work.

Q And did you fire—would you say that was a main line kind of operation, or would—

A Shifters.

Q That would be mine run shifters; picking up coal?

A Yes, sir.

MR. ADKINS: That's all I have.

REDIRECT EXAMINATION

BY MR. BOITER:

Q I want to go back to this picture, if I could. Mr. Adkins was asking about stay bolts and the steam that would come out of the stay bolts. Is there any question in your mind that when the boilermakers took the jackets off the steam locomotives to fix the stay bolts the asbestos was dusty and dirty?

[214] A The asbestos was what?

Q The asbestos was dusty and dirty during that process?

A I might have made a wrong statement.

Q Okay.

A On fixing the boiler and I remember right now, at the present time. The steam engines would come in of a evening or the early part of the night and they knocked the fire out of it and they took it around to the repair shop where this work was to be done. We drained all the water and steam off of there and it was pretty well cooled off by the next morning and the asbestos was dry at that time.

Q It actually sat and dried during the night before they took it off?

A Because the engine had to cool off before they could work on it.

Q Is there any question in your mind that the work done the entire time in the 40s to the 60s that type of work that you were doing at the Iaeger shop where you worked?

A An emergency service is what it was.

MR. BOITER: No further questions.

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[4] MR. RION: Number one, we move to when Mr. Adkins cross-examines Dr. Gaziano about other cases he's testified in, which he's certainly entitled to do, I don't have any problem in him pointing out that they weren't all railroad cases. But I think in light of the way this case has developed to point out that they were cases against the manufacturers should be excluded for two reasons, and I think we need both of these. Ordinarily, I wouldn't make this motion.

Number one, you've ruled evidence that these employees have sued the manufacturers and might have received settlement is irrelevant. That alone is not enough. Mr. Adkins stated during voir dire that these employees have sued the manufacturers and might have received money. I objected and you sustained my objection. I'm in the position of trying to unring the bell.

They've all heard the inadmissible evidence, not for evidence—they've heard the inadmissible facts through Mr. Adkins' statement. We're trying to unring the bell. If your ruling is going to have any teeth at all, if he's allowed to say what he said in voir dire and then continue to emphasize that such suits exist, [5] these folks are smart. They're going to put two and two together and figure out, oh, yeah, that's the ones that Mr. Adkins' said in here that they've sued, and I don't think there's any undue prejudice to him; so, I move in light of the fact that he did mention the inadmissible material voir dire that he be precluded from making statements that would tend to rering the bell that we're trying to unring. That's number one.

Number two, and I want to—if it's not an issue in Dr. Gaziano's testimony, it would probably be better not to argue this now; I don't know that it is. Mr. Adkins stated in opening

he wanted to introduce evidence of when the manufacturers warned as evidence on state-of-the-art. I objected to that on two reasons. Number one, 401, I don't think it's admissible. I don't think it proves a point. What they knew or what was known or knowable is one thing. The action they took or didn't take, I don't think is relevant.

Number two is more important, Rule 403. What happens when that evidence comes in? As the Court knows, I've got pretty good evidence that any failure to warn by the manufacturers—let me back up. The purported evidence would be they didn't warn because the general state-of-the-art was such that nobody knew [6] enough to do anything. That's the inference to be drawn, you know, fair enough if the jury wanted to draw it.

The Court knows that I possess testimony that would tend to rebut that, and that we have, in fact, proven to the satisfaction of jury after jury in the products' cases that the failure to warn was not as a result of the state-of-the-art being insufficiently developed, but the result of; number one, negligence on the part of the manufacturers; and, number two, intentional—or reckless misconduct.

Practically every jury that has considered the issue has said that the failure to warn by the manufacturers was due to reckless misconduct.

Now, the position that I'll put in if the evidence is to—do I just let it sit, and it's pretty powerful, to sit in alone. The manufacturers didn't know, how should the railroad know, or do I then explain to the jury through some other collateral evidence what really went on in my view, that the failure to warn of the manufacturers was not due to the insufficiently developed state-of-the-art, but due to their negligence and/or misconduct. I can't do it through jury verdicts, but I can do it through witnesses and documents.

[7] I have to do something if it comes in, Judge. I'm not just posturing. It's good evidence for him left unrebutted. If I rebut it, then under Rule 403, my view is the evidence should be stricken partly because its probative value is outweighed by prejudice, but that's the—the thrust of my argument is the other components of 403 which is, does it tend to unreasonably multiply the proceedings on collateral matters and is it likely to leave the jury confused? That's the gut of my argument is that it unreasonably—either I've got to sit and let it come in and get stuck with it, or I've got to put on my rebuttal which I think will unreasonably multiply the proceedings and confuse the jury.

I mean, what are they to do with all this and I'm not just posturing on this. I need to prove and that we're not stopped that Owens Corning, Pittsburg Corning, Johns Mansville, that Kenneth Smith told them the warn [sic] in '52 but they didn't; the documents that say, we can't say anything about cancer because it's gonna hurt sales. That's why they didn't want it. Or, at least, that's my view, that's my evidence. And, you know, I can't let him put this pretty good sounding evidence in without rebutting it.

[8] It is largely collateral, so I think under Rule 403 it should be not permitted because of that tendency to multiply these proceedings on collateral matters and then confuse this jury on, you know, what are they supposed to do with all of it, because in light they're going to have to hear all this collateral evidence about somebody else's knowledge and then there's a jury instruction that says "the duty toward the railroad workers is non-delegable."

So, really it's not an excuse, but he wants to put it in on state-of-the-arts. I think it should be not permitted. If it turns out he doesn't want to use it with Dr. Gaziano, then you could smoke this over or think this over and make your decision later, but that's my motion.

I've got one more motion on Ms. Stephens. She's begun, and I—it may be happenstance, but she's falling asleep during my testimony and waking up on cross-examination. It happened during opening and she's hearing about half of the case and ninety percent of what she's hearing is the defense. And Judge, I'm concerned enough already where I move—I move that she be replaced because she's not hearing the whole case and what she is hearing is the other side.

[9] I think Mr. Adkins would have the same concern if she stayed awake on direct and—

THE COURT: It's just more scintillating—

MR. RION: It might be. I know I drone on, and I'm not the most interesting speaker in the world, and Mr. Adkins may be more interesting, but the fact of the matter is we have alternates here and she is not hearing our case and is hearing his.

THE COURT: Or at least her eyes are open during his.

MR. RION: Yes, sir.

THE COURT: Well, where do you want to take this?

MR. RION: Yes, Your Honor.

THE COURT: Well, let me just ask; I assume the reason you present is because you ask Dr. Gaziano some state-of-the-art stuff?

MR. RION: About ten minutes worth. It's nothing elaborate.

MR. ADKINS: Well, Your Honor, I think—well, first of all, these other cases against manufacturers, it seems to me that this—I mean, if this is a reasonably intelligent jury, which I think it is, they know what's going on. So, it's no mystery— [10] that what this goes to is, which I think is relevant, is to the bias of the witness which is something that we're allowed to do in terms of who he testifies for, how

much he testifies, et cetera, how much money he makes. They do this all the time. Lawyers do this all the time.

MR. RION: But, I don't have any problem with that.

THE COURT: Well, I don't know he's going to get into the details of what his testimony has been or where he's given it in order to show that he's made some money as a witness.

MR. ADKINS: I'm not sure I understand. I mean, I'm going to ask him if he's testified in cases where manufacturers were defendants, and I think I'm entitled to do that. That's all I'm going to do, just what I do with the other witnesses—go to their bias.

MR. RION: I'm saying it should be on behalf of—plaintiffs will show the bias and not rering the bell.

MR. ADKINS: Well, I think who the defendants are is important, too. I mean, we do this all the—I don't—this is sort of—I mean, I don't even understand even that we—

THE COURT: You don't do it all the time. [11] Most of the times you're asking witnesses—for any potential bias, you ask if he's testified for the lawyers before. I don't know the last case when anybody's got into the substance of witnesses' testimony.

MR. ADKINS: What point did Mr. Rion make yesterday with Dr. Brody about testifying? Now, Dr. Brody, didn't you or haven't you testified on behalf of manufacturers of asbestos? Why did he do that? He did that because he was trying to show that Dr. Brody was not biased. I testify for plaintiffs when they ask me. I testify for defendants when they ask me. I don't understand why I have to have my hands tied behind my back when I'm doing these things, and they just want to get free rein.

MR. RION: Because he injected inadmissible material into the voir dire.

THE COURT: Well, okay, let's take the next step. Do you intend to ask Dr. Gaziano about manufacturer warning?

MR. ADKINS: Well, yes. I mean, if he figures it was state-of-the-art—I mean, Judge, that goes to—look the railroad is an inuser not a manufacturer. Now, if these manufacturers are out there having [12] conspiracies to hide information, et cetera, et cetera, the railroad doesn't know about that; and certainly it seems to me that Mr. Rion would want to use that to say that when those warnings went out, the railroad then was put on notice at that time, that there was a problem, and whether we did or do not do something then would be evidence of negligence on our part.

So, certainly this is something that's very relevant. I mean, the railroad or N & W was not a party if there was a conspiracy by the manufacturers to hide information about asbestos, not putting warnings on it. We're out here using it.

Now, to the extent that we may have an obligation to independent things, that's another issue, but certainly if we're buying from a company, products from a company, we have a right to rely on the fact that they're going to give us information, that if there's a problem they're going to warn us. It goes to our knowledge or lack of knowledge, however you want to say it, I mean, it's just sort of basic to the case.

THE COURT: They're [sic] actually two facets to that as I see it. One is that they didn't warn, so you didn't get information from that about the hazards.

MR. ADKINS: Yes.

[13] THE COURT: That's one set. So, another facet, and that's what I take it that Mr. Rion's concerned about, and that is that the suggestion that the manufacturers didn't warn because they didn't know. So, the manufacturers didn't know any more than we did and that seems to be a position that he can beat you up on.

MR. RION: But don't want to.

MR. ADKINS: This goes back to trial tactics again, Judge. I think we ought to be able as lawyers to have some rein in terms of our tactics as long as we're not violating some rule of evidence or something clearly, but this gets to, you know, what kind of argument you make based on the inferences from evidence—I mean, I don't see how you control all of that.

If we're going to have a fair situation here, where we get a fair chance to present our side of the situation, whatever it is.

THE COURT: Sure, and I understand that and am sympathetic with it to the extent that—part of it, I think is probably appropriate, but you know and I know that if you use that to create the suggestion that the manufacturers didn't know in 1971, how could you know [14] that the plaintiffs could put on a good three weeks of testimony, additional testimony, showing that the manufacturers did know. They knew all along and didn't warn them because they chose not to warn them and that's what a lawyer for Owens Corning calls a pig path. It's a deviation from what the case is all about.

I don't have any trouble at all with you saying, we didn't get any warnings from the manufacturers, and the inference from that is very simply that that was the source of information you didn't have.

On the other hand, to suggest that you didn't get any warning from the manufacturers because the manufacturers didn't know is just not true.

MR. ADKINS: Well, maybe so, I don't know. Again, that's—

THE COURT: Everybody does. Everybody knows. We tried these cases—we could probably take a poll of this jury on the manufacturers today.

MR. ADKINS: Well, Judge, if that's the case, I don't understand why we're concerned about all this. If the jury already knows, then, you know, we ought to just send them out and let them decide the case and then not put on any evidence if they already know everything about everything.

[15] MR. RION: It would seem like to me if the issue is; number one, they didn't get any warnings from the manufacturer, I'm sure that's admissible because the F—because the FELA cases are very clear. It's a non-delegable duty, so I'm not sure that they can rely on some third party.

THE COURT: But, you know and I know that the sources of information available to any employer, any large business enterprise, is pretty broad based. In this case, one of the sources of information for knowing or the ability to know are the manufacturers.

MR. RION: Well, I think if they want to bring in a N & W employee in here who will say, "one of the reasons we didn't do anything about asbestos was that we didn't get any warnings from the manufacturers", fair enough, but to take—what I think they want to do—I don't think they have that. They want, again, to retrospectively ask Dr. Gaziano, who never worked at the N & W—he's testifying about what was known. Ask him, isn't it true that the N & W never got any warnings from the manufacturers? He doesn't know.

If they want to bring in a paid consultant who will say, the manufacturers never warned until the late '60s. They don't have a shred of evidence that the lack of [16] warning on the manufacturers' products had anything to do with their conduct. This is a negligence based case.

If they want to bring somebody in to talk about that, I think that would be fair, but they don't have that person. So, instead, they want to bootstrap the evidence and argue just generally that there weren't any warnings by the manufacturers, and, therefore, they didn't receive anything. It

doesn't have anything to do with their conduct. It could and they should be able to prove that up, but I don't see where it's appropriate with Dr. Gaziano and that's what's before the Court now, and I'm not sure it's going to be appropriate. They've got one witness that will work for them, but as I understand what he said before, it's more like the manufacturers didn't know, therefore, the railroad couldn't know. They might be going to doctor it up a little bit, but I think they're going to doctor it up and get it in under the period that you—that I believe the Court's approved. I don't see any need to argue with you because I think you can make up your mind up on that. I disagree with you, but if they're going to get it in under the period that I believe you've approved, I don't see how they can bring it in as part of the state-of-the-art because you, as I understood, [17] you seemingly believe that that may be sufficiently collateral, that under 403 it should be excluded because it would unreasonably multiple [sic] the proceedings.

I think the avenues you've approved, they need—it's need to be grounded in what they received and looked at, acted on or didn't act on.

THE COURT: Well, maybe it's the appropriate time for me to ask you what, in fact, the evidence is going to show about N & W's knowledge. Are you going to put somebody on from N & W saying that we weren't warned by the manufacturer and that's why we didn't tell our employees that?

MR. ADKINS: Well, I don't need to do that. Everybody knows that the warnings—I mean, it's already in the evidence when the warning came out. So, we were warned when ever a warning came out and we've often talked of it. Why do I need to put somebody up there to tell me something that's already established.

Now, beyond that, we're getting into trial tactics again. I mean, I don't think I'm forced—this is a product, a defective product case in the sense that they're giving us a product that has a warning on it and certainly once that warning is given to us, then we have knowledge. We can't then say, we didn't have any [18] knowledge. I understand that, but up until that point, I ought to be able to have, at least, an inference from that. One of the inferences or maybe, he can put on whatever he wants to as to what we did, how we did it, and when we did it, but I ought to be able to say, this is the first time that the manufacturers warned us that asbestos products were defective.

I mean, it goes to knowledge. I mean, it's the basic issue in this case. I mean, it's the basic issue is what he's trying to say is we had knowledge in 1892, I guess, if you want to—or maybe 1492, but whatever year you want to pick. But it seems to me that you look at all these pieces of evidence to determine what the knowledge of the hazards of asbestos are.

One of them is that the manufacturers didn't warn until 1968 or whenever the date was. That's very basic.

MR. RION: That's getting back to the state-of-the-art. That general information is subject to that 403 need for collateral attack is specific concrete ground-based explanation for what they did or didn't do. It's not, but he doesn't have the horses to bring that on. That's what's going on.

MR. ADKINS: Again, you know, it's in. It's [19] basic. I ought to be able to argue it. I ought to be able ask any witness up there if they know as to when the manufacturers put warnings on asbestos products, if they know. If they don't know, all they have to say is, I don't know. If Dr. Gaziano doesn't know, all he has to say is, I don't know.

MR. RION: But if he does that, then it's an issue of what's the why to the when that I can't leave it alone.

THE COURT: I understand.

MR. RION: If he brings a N & W guy in here who says, gee, we just didn't say anything on the boxes and so we assumed it was okay, and I whip out the AAR documents and say, yeah, but you knew here, and I've done it.

If he brings a scientist who comes in and says, gee, the state-of-the-art was such blab, blah, blah and the manufacturers didn't warn, then I'm stuck.

MR. ADKINS: Well, Judge, I think we have a very good argument on that that in terms of the railway industry as what was known based on the literature and the studies in the railroad industry and that's who we are. We're not the manufacturers of it. I mean, are you saying I can't put a witness up there that's going [20] to disagree with Mr. Rion's assertion that the state-of-the-art wasn't what he says it is.

I mean, there's a big dispute about this, particularly in the railroad industry, as to when things were known. I mean, I understand you can look at the AAR documents. You can look at all that.

THE COURT: We're not going to dispute it. It's relatively clear that your company was in a meeting in the 1930s when they were told that asbestos caused asbestosis.

MR. ADKINS: There's no question about that.

THE COURT: I would suggest that you have a compelling inference that you didn't have any basis to warn because the manufacturer didn't warn until the 70s is not going to be very persuasive.

MR. ADKINS: Well, maybe not, Judge, but that's one of the pieces of evidence that I have. I understand the case is not strong on the state-of-the-art, but it's certainly there to dispute about it and I'll have a witness that's going to dispute it, and I think I should be allowed to do that.

THE COURT: So, why do you want to use Dr. Gaziano for that purpose? You asked me to cut these guys down to the limited of the number of witnesses on [21] certain facts already.

MR. ADKINS: If Dr. Gaziano is going to be offered up as a state-of-the-art witness, I think I should be able to cross-examine Dr. Gaziano about the state-of-the-art.

THE COURT: Is when the manufacturers warned state-of-the-art? Is it?

MR. ADKINS: I'm sorry?

THE COURT: Is the time when the manufacturers warned, is that an issue of the state-of-the-art?

MR. ADKINS: That's one piece of the puzzle, Judge, that we're talking about. I understand the puzzle has a hundred pieces or maybe a thousand pieces.

THE COURT: Well, to accept that, you use that to give rise to an inference that the manufacturers did not know anything until they warned, and I know and everybody else who's had any contact with this litigation knows that that just isn't true. So what that does is that that puts Mr. Rion in the predicament where he's got to put on another case, an entirely different case.

I'm going to grant the motion that is with respect to asking Dr. Gaziano when the manufacturers warned.

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TRIAL TRANSCRIPT
April 16, 1998

Gaziano Testimony

* * * *

[25] (WHEREUPON, the jury returned to the jury stand.)

THE COURT: Welcome back. Again, let me start with an apology. I had a couple of matters this morning, actually a couple I didn't even know about that took a little bit of time, and I'm responsible for the late start. I apologize.

Are you ready to call your next witness?

MR. RION: Yes, sir. We call Dr. Dominic Gaziano.

(WHEREUPON, the witness was sworn.)

THEREUPON came,

D0MINIC GAZIAN0, M. D., called as a witness on behalf of the plaintiffs after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. RION:

Q. Good morning.
A. Good morning.
Q. You are Dr. Dominic Gaziano?
A. Yes, sir.
Q. Have I correctly spelled your first and last name?
A. Yes, sir.
[26] Q. All right. Where do you live, Dr. Gaziano?
A. I live in Charleston.
Q. Your age?
A. I'm 61 next week.
Q. Are you old enough where you have to think about it for a minute?

A. Yeah, actually—I worry sometimes about what I'll remember when I don't remember now.
Q. I've reached that age myself. Are you married?
A. Yes, sir.
Q. How many children do you have?
A. I have five sons.
Q. You're a doctor?
A. Yes, sir.
Q. Are any of your sons a doctor?
A. Four of them.
Q. Yesterday, we had Dr. Brody here who was a research scientist, Ph.D. doctor. You're a medical doctor?
A. Yes, sir.
Q. You're involved or have been over your career in patient treatment rather than research; is that correct?
[27] A. Yes, sir.
Q. What specialities, medical specialities, are you certified in?
A. I'm certified in Internal Medicine, Pulmonary and Lung Disease and Critical Care Medicine.
Q. Are you Board certified in all three of those specialities?
A. Yes, sir.
Q. Has everybody who practices in internal critical care in pulmonary medicine, do they all have to be Board certified?
A. No, sir.
Q. But you've taken a special test to prove your certification in those areas?
A. Yes, sir.
Q. How many doctors in West Virginia to your knowledge are triple Board certified in internal and in critical care and pulmonary medicine?
A. Mr. Rion, I really don't know. At one time, there wasn't that many, but I think there's several now.

Q. Does critical care medicine relate to your pulmonary medicine specialty?

A. Yes, sir. As it's so involved, critical care medicine is a relatively new specialty and as it [28] evolves, the pulmonary doctor was the one who was involved in the intensive care unit managing people on respirators or breathing machines and from that position, they had to learn all aspects of critical care, which is largely intensive care work, and so, most intensivists as critical specialists are called, go through the pulmonary pathway.

Q. Did you play any role in starting the critical care section here at CAMC?

A. Actually, I had a very important, a very fundamental role, in the establishment of the critical care unit at CAMC in the 80s. I was Director of that particular division that had set up and established intensive care units at General Memorial in the 80s when they were coming of age.

Q. Dr. Gaziano, have you in the last couple of years suffered from a heart attack?

A. Well, not a heart attack. I had angina about three years ago. It was on my birthday, April, and I had an angioplasty, and it didn't work and five weeks later I had to have it redone, and it did work the second time.

Q. Since that time, have you retired from active patient care?

[29] A. I've tried to retire. I've tried to slow down after that happened, but it's difficult. So, as of October, I've given up clinical practice.

Q. So, you gave up your clinic practice in October of 19—?

A. '97.

Q. '97. So, let's go back. How long were you in the active clinical practice of medicine here in the Kanawha Valley? When did you come here and begin practice?

A. I started in '69 to '97.

Q. So, almost thirty years?

A. Yes, sir.

Q. What type training did you undergo before you came here to Charleston in 1969 to begin your practice? Just tell us about your medical training.

A. All right. I graduated from West Virginia University in Premed in 1958 after four years. Then I went to the Medical College of Virginia and graduated from MCV in 1962. In 1962 to '63, I stayed in Richmond and was an intern. From '63 to '65 I was in the Army as a medical officer in New Hampshire. '65 to '68, I was back to WVU in Morgantown in an internal medicine residency program, and then '68 to '69, I had a year [30] fellowship in Liverpool, England and studied lung diseases.

Q. That was one year?

A. One year, yes, sir, and then I came to Charleston in completion and began practice.

Q. Over the years you spent here in clinical practice, '69 to 1997, did you attempt to limit your practice to the diagnosis and treatment of any particular type diseases?

A. I've been a specialist in lung diseases essentially and all the ramifications of lung diseases, which are lung disease in individuals and also a segment of my practice has always been occupational lung disease.

Q. A lung disease caused by a job?

A. By work, yes, sir.

Q. What type occupational lung diseases, just briefly, have you been involved in since you've been here?

A. Well, practically all kinds we see in West Virginia; coal—coal worker's pneumoconiosis or black lung; silicosis, asbestos, asbestosis, and industrial asthma or various bronchospastic conditions, occasional trauma of lung or chest wall injuries. Those are the [31] major areas.

Q. What percentage over the years do you believe was, say, devoted to occupational lung disease?

A. I had a significant portion always from the very beginning. The Federal Health and Safety Act in 1968—I

was right in the middle of black lung assessment. So, anywhere from thirty to fifty percent.

Q. All right.

A. Over the years.

Q. Then other fifty percent of your practice was devoted to treating and diagnosing what type lung diseases?

A. Well, mostly people who have emphysema, chronic bronchitis, asthma, lung cancer and various other less common causes of lung diseases, as well. I've treated people who have Black Lung and asbestos disease.

Q. What hospitals have you worked at and held privileges at here?

A. I've had privileges at CAMC and when I came in, there were two divisions, two hospitals and then they combined. So, it's been essentially the same hospital, General and Memorial and Women's and Children and Mountain State.

Q. Could you tell us some of the positions you've [32] held at CAMC?

A. I was Director of the Respiratory Therapy Department for many years. I was Director of the Intensive Care Unit as I mentioned early on. I came after a few years here, and I gave that up after about fifteen years.

Q. You mentioned you got the Intensive Care Unit or was it the critical care unit, or at least the critical care portion of that?

A. Yes.

Q. Continue on, sir.

A. I was Chairman of the Department of Internal Medicine. I was Chief of the Pulmonary segment for a number of years. I was Chief of Staff for one year. I've been selected to head a number of committees of which I just haven't put in CV over the years as it relates to certain evolutionary problems within the hospital. I was the Medical Director of the Respiratory Therapy at the University of

Charleston from its inception. I helped start it and I remained the Medical Director of the Respiratory Therapy Department.

Q. Have you also been involved in teaching medical students?

A. Yes, sir.

[33] Q. Do you do that in classroom lectures or do you do that as clinical on-the-job teaching?

A. Well, actually I have taught students and residents and basically what they do, they rotate with me on my clinical care patients on a monthly basis.

Q. Do they come from West Virginia University?

A. Some come from West Virginia University, some come from Marshall and some come from the osteopath school.

Q. So, they worked with you on the job in clinical practice to learn the practical aspects of medicine?

A. Yes, Sir.

Q. Have you been or are you still a member of the West Virginia Thoracic Society?

A. I am.

Q. Thoracic simply means chest?

A. Yes, Sir.

Q. Have you been president of the West Virginia Thoracic Society?

A. Yes, Sir.

Q. Is there an American Lung Association of West Virginia or West Virginia Division?

A. Yes, sir.

[34] Q. Are you on the Board of Directors of the West Virginia Division of the American Lung Association?

A. Yes, sir.

Q. I don't mean to force you to brag on yourself too much, doctor, but this—in court, you're supposed to go through your qualifications so that the jury can judge your professional qualifications and abilities. Is there a book published on the best doctors in America?

A. Yes, sir.

Q. For 1996 and 1997, were you listed among the best doctors in America in that book?

A. Yes, sir.

Q. You got an award one time didn't you, Doctor, called the William L. Cook Award?

A. Yes, sir.

Q. Tell us what that was for?

A. The American Lung Association of West Virginia every few years will give an award to somebody as it relates to contribution to lung disease in this region, in this area, in West Virginia, and I got it in the '80s or early '90s.

Q. Was it any particular part of your work you got that for, anything in particular that you'd done?

[35] A. Well, I got it about a year after I was the co-producer of a commercial video, *Tobacco Road Dead End*, which was used in a number of school programs and the Lung Association itself took that to many schools talking about the health consequences of tobacco.

Q. You've been active in trying to keep kids from smoking?

A. Very much so.

Q. Are you a big opponent of smoking?

A. Smoking is dangerous, very dangerous, so I certainly and am probably more now. I'm probably an evangelist against smoking. If you give me one other person, I'll get up and give you a lecture on it of the health consequences of smoking.

Q. Have you diagnosed literally thousands of people with smoking related diseases?

A. Yes, sir.

Q. Do you have any hesitation—these cases are going to involve as we get into them some debate about whether smoking versus asbestos or some combination is causing various breathing problems. I think you understand that from having looked at the individuals, don't you?

A. Yes, sir.

[36] Q. Do you have any hesitation where you find it to blame tobacco for hurting someone?

A. No, sir. I can recognize tobacco related disease easily.

Q. I guess that was the question. In addition to the interests and concerns you have about tobacco disease, I think you mentioned that you have a particular interest in occupational or job-related lung disease; is that correct?

A. That's been an important part of my practice.

Q. When did you first acquire this interest in diagnosis and treatment of—to the extent there is treatment of occupational lung disease?

A. Well, actually I—the interest is a matter of what I'm supposed to do. In my training, I was taught the part of my medical training in pulmonary residency and fellowships about occupational lung disease, so that was a part of my background and training and having come to Charleston, West Virginia, which was a place where there was abundant occupational lung disease, it was natural that I would see a significant amount.

Q. You mentioned you've seen disease in coal miners?

[37] A. Yes, Sir.

Q. People who have worked around silica?

A. Yes, Sir.

Q. Asbestos?

A. Yes, Sir.

Q. Has there been over the years, doctor, an union in West Virginia called the Asbestos Workers Union that were insulation workers?

A. Yes, Sir.

Q. Did you do any work with the Asbestos Workers Union and their membership and the possibility of asbestos disease in that union?

A. Yes, I think that was an important part of my getting interested in asbestos in the early '70s, very early '70s. I suppose in '72, I was asked to be a—to evaluate and monitor

and follow insulators from the Local 80 of the Insulators Union which consisted of eastern Ohio and West Virginia in solving asbestos involving approximately 150 men at that time who were ,insulators.

Q. Did you find disease in that workforce?

A. Yes, Sir.

Q. Did you publish an article about your findings in following that union?

[38] A. Yes, sir. Doctor Ballog who was a fellow working under me and I published a recent article in the West Virginia Medical Journal.

Q. What was the title of it?

A. I believe it was *Asbestos Lung Disease In West Virginia and Eastern Ohio*, but I haven't looked at it in years.

Q. To your knowledge, has anyone else published an article in the medical and scientific literature specifically on asbestos disease in West Virginia?

A. I don't know of any, no.

Q. Doctor Gaziano, are you certified through the De[partment] of Labor—excuse me, it would be certified through [the] International Labor Organization as a specialist in reading [x-] rays for signs of dust diseases?

A. Yes, sir.

Q. Tell us about how you acquired that certification and what it is?

A. Well, it's the examination of learning how to—not learning. It's a learning, too, of your competency in reading x-rays of people with dust diseases. It's sponsored by the federal government, by NIAGE, and it's given in various places periodically. Most of the time, it's given in Morgantown because [39] there's a big center there or maybe nationally it's at various conferences and what it involves is, you're given 80 x-rays to read in a period of time to read it in, and then you read it for pneumoconiosis or dust disease and for any other disease you find on it; and then after you take that exam, you're graded and if you pass, you get a certificate

that says you're a "B-Reader" and qualified under this program to read x-rays for dust diseases. And that certification lasts for four years and then you have to retake the test.

Q. Do most doctors who take that pass or fail?

A. Well, about half pass and half fail. The pass rate is anywhere from—the past rate anywhere from 60 to 60 percent. Some years it's better than others.

Q. You were first certified in what year? If you have to look at your CV I think you've got it.

A. I think you've got the CV because I don't have it in front of me.

Q. It says right here "certified as "B-Reader" 1981", does that sound about right?

A. That's about right, yes, sir.

Q. You're still certified today?

A. Yes, sir.

Q. Over the years, Doctor, have you read [40] literally thousands of x-rays to determine whether any type of dust disease was present on the x-ray?

A. Yes, sir.

Q. Has the U.S. Navy asked you to act as a consultant and specialist in reviewing of x-rays for the Navy to determine whether Naval employees show signs of asbestos disease?

A. Yes, sir.

Q. Have local law firms, including, for instance, Mr. Humphrey's office here, asked you to review x-rays for signs of asbestos disease?

A. Yes, sir.

Q. Have local industries ever asked you to do evaluations of their workers to see if there is any signs of occupational lung disease in employees?

A. Yes, sir.

Q. Let's talk a minute about that. Could you, Doctor, tell us the names of some of the industries who've asked you to evaluate their employees for signs of dust disease?

MR. ADKINS: Your Honor, could we approach, please.

THE COURT: Okay.

(WHEREUPON, a discussion was had at the [41] bench out of the hearing of the jury)

MR. ADKINS: Your Honor, the specific point I was trying to make earlier about, you know an even playing field. You know, he can go far afield to establish that his witness is not biased because he testified. But the Court if not permitting me to do that when I do cross examination of these witnesses and I think we can't have it both ways. I just want a level playing field.

MR. RION: I've got one comment. The only difference is inserted clearly, irrelevant material into this proceeding in the beginning. The reason I've asked for this—if that hadn't happened it would be fine, but there ought to be some consequence for what he did.

THE COURT: Where are you going with this?

MR. RION: Just the names of people in the industry who do evaluations for DuPont, Union Carbide.

MR. ADKINS: Just so the record is straight, I think it's irrelevant.

MR. RION: I'll just move on now. I have to get the names.

(WHEREUPON, the bench conference was completed and examination continued)

BY MR. RION:

[42] Q. We're not going to go through the names of them, Doctor, but you've done evaluations for local industries?

A. Yes, sir.

Q. In addition to just reviewing x-rays for signs of diseases, have you over the years evaluated hundreds of workers to see—or would you say it would be more than hundreds to see if there's signs of dust disease?

A. It would be more than hundreds.

Q. Thousands?

A. Thousands, yes, sir.

Q. You mentioned that the work you did in doing the film in the school to persuade not to smoke, have you done any other work in the community against smoking?

A. Yes, sir.

Q. Tell us a little bit about that?

A. Well, I personally have gone to schools a few times. I have talked to some hospital sponsored seminars on smoking cessation. I have been a participant on panels of that kind and I've gave many lectures at the hospital about cigarette smoking and its health effect.

Q. I think that covers your professional [43] experience and qualifications. I'd like to ask you if Plaintiff's Exhibit 4 is an accurate copy of a summary of your qualifications?

A. Yes, sir.

MR. RION: We move Plaintiff's 4 to be received.

MR. ADKINS: No objection.

THE COURT: It will be received.

(WHEREUPON, the document previously marked for identification as Plaintiff's Exhibit No. 4 was received into evidence and made a part of the record herein.)

BY MR. RION:

Q. Dr. Gaziano, before we get to your opinions about each of these individuals, I've got a few general questions about asbestos disease and I want to try to cover without going back over what we heard yesterday. So, I just want to tell you, generally, we heard yesterday what asbestos is, how

it gets in the lungs, what asbestos is, and a little bit about cancer risks from asbestos and I wanted to ask you just a couple of follow-up questions to add to our general knowledge of asbestos, and then we'll go the individual workers. Fair enough?

[44] A. Yes, Sir.

Q. All right. In your experience in following workers here in the Kanawha Valley with asbestos, in your opinion based on your experience, is asbestosis curable?

A. No.

Q. Is there any effective treatment for asbestosis?

A. No.

Q. In your experience, can asbestosis be progressive?

A. Yes, sir.

Q. By progressive, what do we mean?

A. That it could get worse over time.

Q. Can it get worse even while workers no longer are exposed to asbestos?

A. Yes, sir.

Q. Now, in your opinion, can asbestosis be fatal?

A. Yes, sir.

Q. How can it be fatal?

A. Asbestosis can destroy the lung and if it destroys a sufficient amount of the lung, it can be fatal or if it destroys a significant portion of the lung, and you develop a respiratory infection, it makes [45] you least likely to survive that.

Q. All right. Now, does everyone who has asbestosis always develop progressive disease and die?

A. No.

Q. Do many people have asbestosis and not progress?

A. If it doesn't progress clinically, yes, sir, that's correct.

Q. Now, do you have any guidelines you've used in trying to come to grips with in your opinion which patients do progress and which patients don't progress?

A. Yes. I, yes, I refer to what the literature says about that and there is clearly some who don't progress and I've

learned from my own experience following people now for several years, that those who are late in their work history or retired and who have no significant impairment, that's the group that tends not—say, you're sixty years old and you have asbestosis and you don't have any impairment, I've followed some of these people yearly or every other year, and I've found that many of them don't progress.

Q. In the stages of asbestosis, at what point do you believe it becomes likely that a worker is going to develop significant progression?

[46] Let's start with and I'm kind of going to write here when it becomes visible on x-ray. Is there a period before you can see asbestosis on x-ray that it exists in the lung but's not visible by x-ray?

A. Yes, sir.

Q. I'm just going to put pre-x-ray here. So, a worker can have the disease in his lung, but still be at a stage that it's not detectable?

A. Yes, sir.

Q. At some point it progresses to the point that you can see it on chest x-ray, correct?

A. That's one way to detect it.

Q. All right.

A. Another way is to detect it—

Q. We'll get into all the various tools that you use. Is it possible for a worker to have asbestosis that's gone just in the lung tissue not visible on x-ray that it gets to the point that you can see it on x-ray, but it still has no measurable impairment by breathing test?

A. Yes.

Q. So, I'm going to write here, no measurable—I'm going to abbreviate that, impairment. Now, these folks here who progress from the pre-x-ray to the x-ray [47] stage, when I say no measurable impairment, in shorthand we simply see their breathing tests where they blow into a tube and you

measure the amount of air and the diffusing capacity, all that is still normal but their x-ray is abnormal?

A. Yes, sir.

Q. Okay. Now, are these folks with the mild x-ray changes and no measurable impairment, are they still at risk for cancer?

A. Yes, sir.

Q. All right. We're talking right now—let's keep on the subject, not of cancer but of progressive impairment from the asbestos itself. Now, at some point—if I took a 100—let's say, if we took a 100 of these guys who had x-ray changes and no measurable impairment, if you were to talk to each one of them individually and they would say, "Dr. Gaziano, am I likely to progress to the point where my shortness of breathe gets noticeably worse?" As I understand what you're saying, you would probably tell each individual the odds are, you probably won't?

A. Well, I would tell the individual one of two things. If they're well advanced in age and that's the situation I them [sic], I tend to reassure them and tell them [48] that as far as asbestos it's probably—you're probably not going to have a significant problem, and I do that all the time. If they're young enough and still employed, where I consider that to be a stage in which, you know, I don't know what's going to happen.

Q. You tell them you didn't know?

A. I don't know. It could get worse over the years. If you come back in twenty years, I'll see what's happened to you, or ten years or so.

Q. Let's say, even if we had a 100 older men who were retired who had no measurable impairment, you would tell them that the odds were in their favor?

A. Very much so.

Q. Of no progression?

A. It's very much in their favor, yes, sir.

Q. On the other hand, out of 100 those, you'd be wrong about some, wouldn't you?

A. I'd be wrong about some.

Q. Some would go on to develop both x-ray and measurable impairment, right?

A. Yes, sir.

Q. Now, in other words, the breathing tests have become abnormal, just we have some idea about these breathing tests. Is it true that you can have lung [49] surgery and say a lobe of your lung can be removed through surgery and you might still have normal breathing tests?

A. Yes, sir.

Q. So, you can have lung surgery, lose a good portion of the lung and still have no measurable impairment?

A. If you used the standard references that we use, that's the case. If you use your own self as a reference, if you have a breathing test before you have the surgery and then you repeat your own later, you'll find it less.

Q. That it went down?

A. But it could be still be within the normal category, normal range.

Q. Right. Now, once someone has gone from this pre-x-ray stage down to its developed enough that you can see it on the x-ray and there's no impairment, and then it goes on to develop both x-ray and impairment, what is your opinion about those folks and their chance of progression?

A. I would say that it's likely that they would progress. Again, I follow individuals in that way and I notice that most of those who have significant or [50] measurable impairment progress and that's just about—not just for asbestosis, but most lung diseases. Actually, that's almost even for emphysema and bronchitis. Once they get a certain level of impairment, it tends to progress.

Q. All right. That's all I wanted to ask you about general information about asbestosis that we haven't already covered.

Just a couple points. Are the diseases we talked about yesterday, Doctor, mesothelioma that's a form of cancer of the lining of the lung caused by asbestos, a couple of questions about that. Have you treated mesothelioma patients?

A. Yes, sir.

Q. In your experience, is mesothelioma curable?

A. No, sir, it isn't.

Q. Sometimes or not very often?

A. You know they're doing studies at Hazard and, I believe, in Baltimore, in which they're doing aggressive treatment and the results are coming out, there is a small group of survivors of five years, a relatively small group, maybe ten percent. Most people die of it and no one—it's almost considered a universally fatal disease because you can't take it out [51] because of its location. You'd have to take out the whole half of your chest to get rid of it and nobody can live with their whole chest wall removed. That's the basis for it being incurable, but there is a few cases that are living longer and whether they're truly cured or not remains to be seen.

Q. Give us some idea. Is the cure rate above or below one percent?

A. I would have said a few years ago, it was probably one percent. Right now with the current information, I would say we're seeing some long survivors of about five to ten percent.

Q. Is it generally a painful disease?

A. Very painful, yes, sir.

Q. What type of asbestos exposures in your experience can cause mesothelioma?

A. All kinds of asbestos exposure can cause it.

Q. Have you, Doctor, diagnosed mesothelioma in persons whose only exposure was in the household by contact through a family member's clothes who had a on-the-job exposure?

A. I believe I've had one case. I'm a little vague. I know it's in the literature and I've seen several mesothelioma with

quite insignificant exposure [52] to asbestos. I'm not quite sure whether I can—but it does occur.

Q. Okay. Is it reported in the literature that family members whose only contact with asbestos is some other family member's clothes can get mesothelioma?

A. Absolutely. That's well documented.

Q. Of all the asbestos diseases; asbestosis, lung cancer and mesothelioma, is it true that mesothelioma takes less exposure than any of the other diseases?

A. Yes, sir.

Q. Have you, Dr. Gaziano, diagnosed cases of—do you have experience in diagnosing cases of asbestos disease in railroad workers here in West Virginia?

A. Yes, sir.

Q. How much experience do you have in that area?

A. A lot.

Q. Have you interviewed railroad workers about their exposure?

A. Yes, sir.

Q. What's been your assessment after interviewing a large number of railroad workers about the type of exposures you had in the railroad industry in the 1940's and 1950's in terms of whether it was heavy, light or what type of exposure?

[53] A. That depends to a great extent on what kind of work or where they were working. There are some areas that actually the dust is the worst place for asbestos in the country and that's called a back shop of steam locomotives refurbishing. Basically, what happens is that the long shed which the engine is pulled into and periodically and I don't know how many years, all the asbestos is stripped—actually the steam engine is nothing more than a boiler wrapped in asbestos, if you can imagine that, with some steel and iron for structure and iron wheels. But basically all the asbestos when it goes through that, it's stripped from the boilers, stripped from the lines, stripped and, actually, it's not even—.

The railroad industry made use of their asbestos. They didn't throw it away. They collected and ground it up and reprocessed it and put it back on and mixed it with a wetting agent so that it could be reapplied. And everybody in that shed had a very intensive exposure to asbestos. The machinists, the people who lagged the pipes, the labors [sic], the pipefitters, plus—and the sheet metal workers all had very intensive exposure.

Then there was an area that has considerable [54] exposure, less but considerable, and that's the roundhouse where the engine is brought in and it's an interesting construction device. I think the railroad industry was very clever in the way they worked these. Then there's six or seven or eight bays. I've never been in one, but I've seen photographs in which an engine goes back and is brought into a bay and less intense maintenance is done there. Again, asbestos is stripped and repairs are made and reapplied, and then there's another area—

Q. Now, talking about those roundhouses. Is what the workers in your experience sometimes called running repairs?

A. I believe so, yes, sir.

Q. Have you ever heard that term?

A. Yes, sir. I think, you know, a minor repair when maybe it's still on the line but it's out for a few hours, a few days. I don't know the specifics.

Q. But they still take pieces of the jacket off where the asbestos can be exposed?

A. Right.

Q. A lot of the workers here, I believe, have talked about running repairs.

A. Well, the other place, I think, is the steam [55] engines, people who ride in the cabs, ride the steam engines and actually rode the diesels until fairly recently. There was a lot of asbestos even in diesel cabs, but the cabs are open and the inside of the cabs were insulated and with the vibration

there's always airborne being generated and also coming in from the wind and in the diesels there was less, but some of these types, electrical apparatuses were insulated and in the passenger engines, the water was heated and insulated, the water tank was heated and insulated and that was in the engine and it brought hot water back to the passenger cars. So, those are the principal—

Then there are other less intense as any kind of occupation operating certain kinds of things like clamps and these things that had open brakes, open bands, open clutches, they weren't concealed like in automobiles and, also, the shops. Every shop was insulated to varying degrees. It's open pipes and some of the walls and ceilings were manufactured, but in the specific case, I couldn't tell you unless you had some intimate knowledge.

Q. So, this is what you've learned from interviewing workers?

A. Yes, sir, and reading about it.

[56] Q. Then reading, okay. I want to get as quickly as I can now into the evaluations you did on each of the individuals here. I saw where I want to go now.

Did Mr. Pauley's and Mr. Humphrey's office, who with us represent, these gentlemen send them to you for you to do an evaluation about whether or not they had any dust disease?

A. Yes, sir.

Q. That's something you've done many times at the request of a lawyer?

A. Yes, sir.

Q. When you get a case from a lawyer, do you sometimes find there's dust disease present?

A. Yes, sir.

Q. Do you sometimes find there's no dust disease?

A. Yes, sir.

Q. In either case, you write a report to the lawyer and tell them what you found?

A. Yes, sir. Often times I may just screen x-rays and not—if the x-rays are negative, then they're not even examined.

Q. Was your bill the same whether there's disease present or not?

A. Yes, sir.

[57] Q. Okay. I want to talk before we talk about each individual, I'll ask you is the workup you do when you're trying to determine if asbestos disease is present, do you do and did you in these cases somewhat or identical exams on each individual?

A. Yes, sir.

Q. What I want to do is just for everybody layout what it is you're looking for in trying to diagnose dust disease or feel there is present, we'll cover it once. That way we won't have to cover it with each individual.

So, I guess—you said you interviewed the workers when they came in, correct?

A. Yes, sir.

Q. That's called taking a history?

A. Yes, sir.

Q. Is the history of exposure to dust one of the factors?

A. That's very important. It's essential, actually.

Q. One, we have to have—I'm going to abbreviate history, HX, history of exposure. Now, do you need every detail of every year of exposure or do you want to have just enough information so you'll know that there's a possibility that they have enough that [58] you need to go on looking at other more objective clinical tests?

A. Well, I think—first of all, it's impossible to get a detailed daily, so basically you want to get a good understanding of their work to give you an idea of whether it they could potentially could have an occupational lung disease. So, history of exposure is very important and to generally get the occupation is important.

Q. You can have a history of exposure and still have no disease?

A. Yes, sir.

Q. All right. So, everybody with a history of exposure doesn't necessarily have disease, you've got to look further?

A. Yes, sir.

Q. Now, for example, we've heard if I started working in asbestos today and you were to see me tomorrow and I were to ask you if I had a disease, what would you tell me?

A. That I don't know. It's too early to tell.

Q. As Dr. Brody told us yesterday that you have to have a latency of decades before you can have a disease or at least a period of years?

[59] A. Yes, sir.

Q. Is that something you look at in your evaluations?

A. Yes, sir.

Q. Of course, you can have a history of exposure and have a latency and still not have disease, can't you?

A. Yes, sir.

Q. All right. Let's get to—I'm going to draw a line here. This is sort of soft information you get from talking to the individual, right?

A. Right.

Q. I'm going to draw a line here and then have you tell us the hard, clinical, medical stuff you look at in trying to tell whether disease is present. You kind of have to get to this—before the medical stuff is even important, you have to get to this, right?

A. Yes, sir.

Q. What objective medical tests—

A. Are you talking about tests or are—

Q. Everything.

A. Tests like examinations?

Q. Yes.

[60] A. I thought that it's important.

Q. Exams. What would you look for there?

A. Well, you look for scars if they're having breathing difficulty and, again, part of the history is history of respiratory symptoms and then when they have certain physical findings such as enlarged ends of the fingers called clubbing or certain sounds in the lungs. It sounds like crate paper we call a rales.

Q. Do you use a stethoscope?

A. A stethoscope and you listen to the chest, and then we also look at the pulmonary function tests and the chest x-ray.

Q. So, you have the exam and chest x-ray?

A. Yes, sir.

Q. And the breathing tests?

A. Yes, sir.

Q. For example, can someone have asbestosis and not have the clubbing of the fingers that you've talked about?

A. Yes, sir. That's relatively uncommon. That's in the far advanced stage.

Q. Some do and some don't?

A. Yes, sir.

Q. How about the noises in the chest?

[61] A. Some do and some don't. That's more common than the clubbing.

Q. How about the chest x-ray, is that always required or usually required?

A. For me, it's almost always required although I will make a diagnosis of asbestosis if they have many of the other features and there is no other explanation for what I find.

Q. So, are you saying that almost always except for some exceptional circumstances?

A. Yes, sir.

Q. Then, abnormality in the breathing test, I think we covered earlier, you can have the disease before you develop the impairment measured by these?

A. Yes, sir.

Q. Breathing tests, when we're talking about measurable impairment, that's what breathing tests are used to determine?

A. Yes.

Q. One last thing about your exam that I want to cover before we get to each individual is a test in your records called the diffusion capacity. What's the abbreviation for that?

A. DLCO.

[62] Q. First of all, tell us what it is?

A. Well, it's a test—it's a certain type of test in which an individual is asked to take in a deep breathe of a gas that has a very dilute solution of carbon monoxide and this gas—they are asked to hold their breathe somewhere around eight to ten seconds and then they are asked to blow it all out. The amount of carbon monoxide that's in the gas is known and the amount of carbon monoxide that's in the gas as the patient blows out you collect a last small amount that's there and then you—it's a rather complicated calculation that actually the computer does for us, happily. You can determine how much carbon monoxide is taking up and that's a rough estimation of the surface of the lung that's involved in transport of oxygen and carbon monoxide and that's called the carbon monoxide diffusion test or diffusion capacity.

Q. Dr. Brody told us yesterday that that was an indirect measure of how much of the ability of your lungs to move oxygen from your air sacs into your blood system, is that roughly right?

A. Yes, sir, what your capacity is in terms of surface area.

Q. Now, there's a certain figure that's [63] considered normal for that, correct?

A. Yes, sir.

Q. Is that adjusted depending upon your age?

A. It's adjusted for age, yes.

Q. So, you have a table that says, for your age you should be able to do a certain amount?

A. Yes, sir.

Q. Now, if you're anywhere below that target figure, is that considered abnormal?

A. Yes, sir.

Q. I mean, if the target figure is 100 and it's 99, do you look—

A. Well, actually the normal is a range of 81 through 120 is the normal age.

Q. So, you've got a figure that's normal, we'll just call that X depending on your age, right?

A. Yes.

Q. Anything from 80 here below to 120 percent above or 81—

A. 81 to 100 is considered normal.

Q. Eighty-one to a hundred—

A. Twenty or whatever. Anything above 81 is considered normal.

Q. Anything above 81, so you've got to get at [64] least 20% below the normal range before you're considered abnormal?

A. Yes, sir.

Q. When they take the population of people on all these things that they study to set these tables, is it true that roughly 95% of the population studied will fall within this normal range?

A. Yes, sir.

Q. Now, the tables that you use in your evaluation are designed by who?

A. Crapo—Morris.

Q. Did you notice in reviewing the records of Dr. Renn who did evaluations for the railroad here that he apparently uses a different table than you use for diffusion capacity?

A. Yes, sir.

Q. Whatever table he uses predicts that the normal is lower than what Crapo and Morris predict, is that correct or a higher?

A. Lower.

Q. So, he's finding people based on his tables—he's saying they're normal where you're saying they're abnormal, correct?

A. Yes.

[65] Q. All right. Now, in—if you go to the AMA Guidelines for Permanent Impairment published by the American Medical Association, what standard did they use for the diffusion capacity?

A. They use Crapo and Morris.

Q. That's the same one you use?

A. Yes, sir.

Q. So, you're using the same one the American Medical Association is and Dr. Renn is using some other standard, and you're not saying there's anything wrong with Dr. Renn's?

A. No, sir.

Q. Just a different standard. Now, have you over the shared years with another pulmonologist here in town?

A. Yes, sir, I have.

Q. What's his name?

A. George Zaldivar.

Q. Does Dr. Zaldivar do asbestos disease evaluations?

A. Yes, sir.

Q. Does he typically do them for the defense?

A. I believe so, yes, sir.

Q. So, even though you all are partners, you've [66] done them more for the plaintiff's lawyers and he's done them more for the defense?

A. Yes, sir.

Q. Have you and Dr. Zaldivar, even though you're doing evaluations for different sides, agreed on what the standard in your laboratory should be for diffusion capacity as far as which you should use?

A. Yes, sir.

Q. What did you agree on?

A. Crapo and Morris.

Q. In agreeing on that, did you and Dr. Zaldivar do any independent research to determine whether Crapo and Morris would be a proper table to use?

A. Yes, sir, we did diffusion on several normal people and sent it in with—bought several of the tables and found that the normal people, Crapo and Morris would hit a 100%, plus or minus ten and that was the basis for selecting that.

Q. So, you and Dr. Zaldivar actually ran people through your lab and evaluated whether Crapo and Morris or some other table most accurately seemed to meet this 95% requirement?

A. Yes, sir.

Q. We went through what you look at; history, [67] latency, physical exam, x-rays and breathing tests. Did you do the same workup looking at all these factors on each of these six gentlemen?

A. Yes, sir.

THE COURT: Is this an appropriate time to take a break?

MR. RION: Yes, sir. I'm ready now. I'm ready to talk about each evaluation, and I think it will go quicker now that we've got all the—

THE COURT: We'll take a recess first.

(WHEREUPON, a short recess was taken after which the following proceedings were had.)

THE COURT: Are we ready?

MR. RION: Yes, sir.

BY MR. RION:

Q. During the break, Your Honor, I thought of one more general point I want to cover and then we'll get to the examination of each person.

This goes back to this diffusion test. You said the abbreviation is DLCO, correct?

A. Yes.

Q. What does the term—if you see on the records DLCO diffusion capacity/VA?

[68] A. That means that the diffusion is corrected for alveolar volume.

Q. That VA means alveolar with a volume?

A. Yes, sir.

Q. Even though the A is second?

A. Right.

Q. You've got it backwards. What is alveolar volume?

A. That's the number of sacs, air sacs, that are in the lung and the volume of them.

Q. So, this is called—does this got something that goes after it?

A. No.

Q. Is this called the—

A. Single breath.

Q. The single breath?

A. Yes. It's the DLCO.

Q. Single breath, all right.

A. You can do it other ways, but we—everybody has examined these individuals and seen the breath test.

Q. All right. So, you have DLCO and DLCO/VA?

A. Yes.

Q. If it says it's corrected for alveolar volume, does it mean this one's right because it's corrected and [69] this one's wrong because it's not corrected?

A. No, sir. It's something with entirely different meaning.

Q. Well, what does it mean?

A. Well, the one that means what capacity or function you have is the DLCO.

Q. This one? (indicating)

A. Right, and that's the one that's used for all disability tables. Social Security uses the top one. AMA Guide uses the top one. They don't use the corrected—the reason for that is that's what determines how much work you can do. That's

determines if you can do 50% at a DLCO of 50%, then that means you can do 50% of work.

Now, when you correct for alveolar volume, that's a technique in which you wanted to know whether the diffusion is lower because the lung volume is less or because there's thickening around the alvei. So, if it tends to correct and actually most people with asbestos disease, the disease is caused by loss, scarring through and destroying lung, so it will correct up to a great extent. In any event, if you correct for alveolar volume that means a rough reference to how much actual lung you've lost rather than how much lung you have [70] that's functioning less than—

Q. Let me use an example. Let's take a person who's got two perfectly healthy lungs.

A. All right.

Q. Let's assume that they score 100% on the DLCO?

A. Right.

Q. Then let's have—this person has lung cancer throughout an entire lung and we have to remove an entire lung.

A. Right.

Q. So, this person is left with only one lung.

A. Right.

Q. Is this person probably going to be impaired from work?

A. He's going to lose half of his lung function, yes?

Q. So, his DLCO single breath would probably be—if he was 100% and he loses one lung would be in the 50% range?

A. It would be about 50, right.

Q. So, he would be in the 50% range, plus or minus depending on the lung size. On the other hand, if you did a DLCO corrected for alveolar volume, where would it be?

[71] A. The DLCO would be a 100.

Q. So, he would be a 100% on this, on the corrected score?

A. Right.

Q. If you wanted to look at—because your alveolar volume simply amount of lung?

A. Right.

Q. So, if you correct for the amount of lung—is one lung working okay?

A. Yes, sir, that's right.

Q. But if you want to look at whether he has symptoms and impairment you would look at the single breath which shows he's got some pretty substantial impairment?

A. Yes, sir.

Q. All right. I'm sorry to keep meandering on these things, but—okay.

Now, Mr. Vance. What I'm going to try to do, Doctor, is put up some photographs of each individuals so we can put up so when we talk about different gentlemen, everybody will be able to know who we're talking about.

You saw Mr. Vance at the request of his lawyers?

A. Yes.

[72] Q. Mr. Humphrey's and others. That's true, and I will repeat that. Each one of these individuals that's the truth of it, correct?

A. Yes.

Q. If you want you can find your records on him and we'll—

A. I have them.

Q. When did you see him?

A. I saw him twice. I saw him on 12/2/95 and 11/15/97.

Q. Okay. How old was he when you saw him in '95?

A. He was 74.

Q. All right. Tell us what you discovered in your interview and history?

A. That he was 74 and that he had worked for the Norfolk & Western Railroad from 1942 to '81. He worked in repair shops to repair engines—for the repair and refurbishing. He was exposed to asbestos working in these areas

where asbestos was supplied and removed and also cleaning up asbestos as a laborer. This was in the handling of steam and subsequently diesel locomotives. He retired in 1987.

Q. Now, that's the extent of the details that you have on his exposure?

[73] A. Yes, sir.

Q. Is that about what you would need and expect before you move on to the more objective clinical tests?

A. Yes, sir.

Q. Now, did he have a sufficient latency period between his exposure and now such that that requirement was satisfied?

A. Yes, sir.

Q. Did you take a cigarette smoking history?

A. Yes, I did.

Q. Is that something that you always do in these evaluations?

A. Yes, sir.

Q. Why is that important to you?

A. That—well cigarettes can cause significant disease in and of themselves and in particular cigarettes and asbestos can greatly increase your risk of cancer of the lung.

Q. So, what did you find on his cigarette smoking history?

A. He smoked one to one-half packs of cigarettes a day for 48 years. He stopped smoking in 1985.

Q. Did you do a physical exam and listen to his chest?

[74] A. Yes, sir.

Q. Was there anything there that you thought was significant?

A. He had rales on the left chest that didn't clear with a cough.

Q. Explain to us what rales sounds like?

A. It sounds—a rales sounds like—when you put a stethoscope up to the chest, it's like pulling Velcro apart. It's like that kind of crunching sound.

Q. Is hearing a rales on one side something you would expect to be consistent with asbestos disease?

A. Yes, sir.

Q. Normally would you hear them on both sides?

A. Not necessarily.

Q. Now, you have an x-ray made.

A. Yes, sir.

Q. What was your finding on the chest x-ray?

A. That he had changes consistent with occupational pneumoconiosis consistent with asbestosis.

Q. Did you do breathing tests?

A. Yes, sir.

Q. What did the breathing tests show?

A. It showed normal spirometry and normal lung volume and a mildly reduced diffusion in '97.

[75] Q. This—you say he a normal spirometry, tell us what that is?

A. Well, that's a test in which one is asked to take in a deep breath and blow into a device that measures how much air you can breathe out and also the speed in which you can get it out. So, you get basically two measurements. We get a measurement to see how much he can get out and it's expressed in terms of liters and then you can also determine how much he can get out in one second and that's a term of whether you have obstructions of air within your lung.

Q. That was normal?

A. That's what was found.

Q. Is spirometry and I asked you this; would you blow out a total amount and that's measured?

A. Yes, sir.

Q. That was normal?

A. Yes.

Q. That is the diffusing capacity or DLCO we talked about, is that different than the spirometry?

A. Yes, sir.

Q. Okay. What did his diffusing capacity show?

A. It showed that it was 71% of what it should be.

[76] Q. That's the single breath one that's used in the impairment tables?

A. Yes, sir.

Q. Is that below or above normal?

A. It's below normal. Eight-one or above would have been normal.

Q. So, he had an impairment of diffusion?

A. Yes, sir.

Q. He had on physical exam, he had rales and you said the chest x-ray showed signs of scarring, right?

A. Yes, sir.

Q. Putting that all together, did you reach an opinion with reasonable medical probability about whether he had any injury or disease from breathing dust?

A. I believed him to have asbestosis and there was a mild degree of impairment.

Q. From your history, is it your opinion that his railroad employment was the cause of his asbestosis?

A. Yes, sir.

Q. Now, I want to have you tell us—let me ask you; he had a significant smoking history, did he not?

A. Yes, sir.

Q. I think—in your opinion, does he have any [77] medical impairment from smoking?

A. No, he doesn't.

Q. So, this is an individual who you believe who smoked but just—the breathing test just don't show impairment from smoking?

A. That's right.

Q. In your opinion, the change in this DLCO is due to what?

A. To the interstitial lung disease which is asbestosis.

Q. Why do you say he smoked all these years yet this gentlemen's impairment is due solely to his fibrotic lung disease? What is the basis of that opinion?

A. The basis of that opinion is that cigarette smoker's disease is invariably an obstructive airways diseases in which they can't get the air out past the mouth or as normally as one otherwise would. When you don't have any obstructive lung disease, which he doesn't have, then you don't essentially cigarette smoker's disease.

Q. So, the fact that this was normal is what you're relying on for the fact that in this particular case, the impairment is not due to cigarette smoking?

[78] A. Yes, sir.

Q. As we go through these cases, Dr. Gaziano, there's some of these gentlemen you're going to say that cigarette smoke played a substantial part in this, is that right?

A. Yes, sir.

Q. It just depends on what these breathing tests show?

A. Right.

Q. If we sort these particular cases out, this is one instance where, for Mr. Vance, you would say the impairment you see despite the smoking history is due to asbestos and not cigarettes?

A. Yes, sir.

Q. As we move through this filthy song where it's combined from both in your opinion?

A. Yes.

Q. Now, from the tests you did, would Mr. Vance fall in the category of people who have disease that has advanced to the point where they have measurable impairment?

A. Yes, sir.

Q. So, in light of that, in light of the fact that you have sufficiently disease with Mr. Vance that [79] he has measurable impairment, in your opinion with reasonable medical probability, do you believe that his asbestos disease will stay about where it is, get better, get worse, what do you think?

A. I think it will get worse.

Q. Why do you say that?

A. Because I think he's got impairment from interstitial disease and that's it more likely that it will progress over time.

Q. Now, at some point if we go back far enough, which we don't have the studies, at some point if we could have caught Mr. Vance at a young enough age, you probably would have had a test where this was normal?

A. Yes.

Q. If you had caught him then and he had chest x-ray scar and a normal diffusion and I'd had asked if he was going to get worse, what would have you said then?

A. As I said, it depends on his age. If he was young enough and since we don't have a track record, I would say I don't know. If he's old enough at retirement age, I'd say it's unlikely that it would be significantly.

Q. Now, Dr. Renn who saw Mr. Vance at the request [80] of the railroad says this diffusion capacity is normal. Have you looked at his record?

A. Yes, sir.

Q. Is that because he uses tables different from Crapo & Morris?

A. I believe that's the principle distance.

Q. If he were to use Crapo & Morris which is the one approved by the AMA Guidelines for permanent impairment that he would have gotten results?

A. Well, I haven't looked at that, so I don't know. I didn't analyze it in that way.

Q. You didn't take his until it ends?

A. No.

Q. Okay. I understand what you're saying. In your opinion, does Mr. Vance have an increased risk of cancer because of his asbestos disease?

A. Yes, sir.

Q. Does that include mesothelioma?

A. Yes, sir.

Q. Does his risk of mesothelioma relate in any way to past history of smoking?

A. No.

Q. Does he have an increased risk of lung cancer?

A. Yes, sir.

[81] Q. Does his increased risk of lung cancer relate to his asbestos exposure in part?

A. Yes, sir.

Q. Does it also relate to his cigarette smoking?

A. Well, less and less he stopped smoking in '85, but there's still a slight increased risk from smoking as well? [sic]

Q. Part of the reason that he's at risk for lung cancer would be his past smoking history?

A. Yes, sir.

Q. And he quit in '85 you said?

A. Yes, sir.

Q. Once you quit smoking, what happens as time passes for your risk for lung cancer from smoking?

A. Well, after about ten years it's about twice a never smokers, which is a great decrease. Normally, it's anywhere from ten to twenty times a nonsmoker.

Q. But it doesn't ever go back to normal?

A. I don't think so.

Q. So, he'll continue to have the risk of lung cancer from smoking and asbestos. Will his risk from either one of them ever completely disappear?

A. No.

Q. Can I have the 10/24/97 electrocardiogram?

[82] MR. RION: If I can have this marked as Plaintiff's Exhibit 5.

(WHEREUPON, the document referred to was marked for identification purposes as Plaintiff's Exhibit No. 5.)

MR. RION: Dr. Gaziano, I want to show you which I have marked as Plaintiff's Exhibit 5 a Scherer Heart Center

cardiology report and we move this as Plaintiff's Exhibit No. 5.

THE COURT: Without objection?

MR. ADKINS: Yes, Your Honor.

THE COURT: It will be received.

(WHEREUPON, the document marked as Plaintiff's Exhibit No. 5 was received in evidence and made a part of the record.)

BY MR. RION:

Q. Do you have a copy of that?

A. Yes, sir.

Q. Plaintiff's Exhibit 5 is a stress test Echocardiography, did I pronounce that right?

A. Yes, sir.

Q. All right. Look through that just a minute, Dr. Gaziano, and tell us does the stress test comment on whether Mr. Vance has any significant impairment from [83] heart disease?

A. It shows that he does not.

Q. If you'd turn to the last page and I'm going to put this on a—by the way, are you familiar with Scherer Heart Center in Bluefield?

A. No, sir.

Q. Does this appear to be a record from a treating physician who is in no way connected to the lawyers in this case?

MR. ADKINS: Your Honor, I object to that. I don't think the doctor would know that.

THE COURT: Yeah.

BY MR. RION:

Q. Well, let me ask you this way. Does this appear to be a record of a treating physician?

A. Yes, sir.

Q. If we look at the last paragraph; it says his echocardiogram was normal. I do not find any evidence of coronary disease and I think his dyspnea—what does that mean?

A. Shortness of breath.

Q. —is related to pulmonary disease and, therefore, pulmonary function studies were done and does show restriction related to exposure to asbestosis in [84] the past. Now, do you agree with the assessment that his dyspnea or shortness of breath is likely related to pulmonary disease?

A. Yes, sir.

Q. Do you agree with the assessment that he has asbestosis?

A. Yes, sir.

Q. Now, they say that the PFT show restriction, do you agree with that?

A. No.

Q. But you do agree with the assessment that there's asbestosis and that his shortness of breath is due to lung rather heart disease?

A. Yes, sir.

Q. But as far as them saying, "restriction", you think they made a mistake?

A. Yes, sir.

Q. Do you believe that because of his lung cancer and the mesothelioma risk that Mr. Vance should be monitored medically?

A. Yes, sir.

Q. Why is that?

A. Well, I think he should be monitored because of his lung condition and be observed for possible [85] development of tumor cancer.

Q. Is there any real way to treat the asbestosis itself and cure it?

A. No.

Q. But you think he should go to the doctor just to make sure whether he develops a tumor?

A. Yeah, I think if he gets a respiratory problem, I think doctors could do to relieve it if it should become a problem.

Q. How often should he be checked and monitored for the development?

A. I'd recommend an x-ray at least once a year and breathing tests every two to three years and then maybe after a while if there's no progression then you can kind of do it as he lives.

Q. Depending on what happens?

A. Yeah.

Q. In your opinion, though, with the DLCO being where it is, do you believe all the time there's likely to be some progression?

A. Yes, sir.

Q. What's the costs of just the medical monitoring for the cancer and progressionally described here?

[86] A. Well, the x-rays probably about a hundred and the examination depends. The follow-ups anywhere from fifteen to a hundred and how much is done on the follow-up exam. The breathing tests are around three hundred dollars for all of the tests.

Q. In your opinion knowing what we know about Mr. Vance's total health picture, is his pulmonary disease or lung disease which you said is caused by asbestos likely to be life-shortening?

A. Yes, sir.

Q. So, if we had a group of potentially twin Mr. Vances, 50 in one room and 50 in the other, but half of them didn't have this asbestos lung disease, which half would live longer?

A. The half that doesn't have asbestos lung cancer.

Q. Now, is that something, Dr. Gaziano, that you will say about anybody—any individual or every individual you diagnose with asbestos, you always say that their disease is sufficient to be life-shortening?

A. Well, I think so, yes. I think if you, you know—you're asking me to put myself in a position of an insurance company and, so, they look at risks and, so, from that point of view, yes, there is increased [87] risk of cancer which is significant. I can very often tell whether they're going to develop disabling pulmonary cancer with a great deal of assurance, but not a 100% even in that instance. So, there is a certain unknown but definite risk of progressive and fatal pulmonary disease.

Q. In his case with the progression you say that's going to occur and the risk of progressive asbestosis and the risk of cancer and you add all that up and what in your opinion in a reasonable medical probability are you saying that the consequences of his asbestos exposure are likely to be life-threatening in some regard or another?

A. I didn't say that.

Q. Okay. That's what I was asking.

A. It's likely an increased risk to develop cancer.

Q. That's what I was trying to clarify.

A. Likely, I think if we got 50%, I don't think life-threatening. If we got the 50% life-threatening versus nonlife-threatening.

Q. So, he's got a substantially increased risk, but you can't for sure?

A. Can't say how much.

[88] Q. Let's—I want to have you come down and show us what you go through to read these x-rays?

A. You want me to read Mr. Vance's?

Q. That's what I figured, yes.

A. Well, I think I always like to put up a normal chest x-ray.

Q. Sure, do that and show us what we're looking at.

A. Abnormal chest x-ray and then the claimant's x-ray.

Q. Be careful when you're doing this, Doctor. Just can of [sic] stretch back so you keep out of everybody's way and then talk.

A. These are standard films from the International Laborer Organization who produce and sell these films to use as a reference on dust diseases of the lung, and they say that this is a 0-0 or normal chest x-ray and basically what we see is the heart in the middle. We see the disphragm which separates the chest contents from the abdominal contents, which are down here. This dark area on both sides are the lungs. There are some strange soft lines and these are close in to the midline and these are the blod vessels, and the pulmonary arteries tend to stay close to the midline, [89] and these are vacuous. So, this defined as a normal x-ray.

Q. All this stuff in here is blood vessels are normal?

A. Yeah, blood vessels and airways.

Q. When you say you can get out here and—

A. In this portion, you notice that you don't see very much because the concentration of them are so small that they're not seen readily on a chest x-ray.

Q. Let me ask you; you say the International Laborer Organization makes these films?

A. Yes, sir.

Q. Are these films that are designed specifically for reading and interpreting dust disease?

A. Yes, sir.

Q. Are these the films you use in taking the test for the B-reader exam that you took?

A. You have to take these along and then you compare these—these are various stages. It's actually about 40 films with various stages of pneumoconiosis compared with a test film or in this case with an individual's film.

Now, this is a case in which the standard film shows a early Class I. Now, this is a pleural plague, [90] this thing right here. This thing that sort of looks like a champagne bottle.

Q. Now, this film has been certified by the ILO as being a normal film?

A. Yes, sir.

Q. This one is certified as showing disease?

A. Yes, sir.

Q. All right. Kind of hard for me to tell the difference.

A. Now, this is Mr. Vance's film. Mr. Vance has some changes in the lower zones and on both films this is a little bit overexposed, but you can see the spots—

Q. Doctor, you may need to, I'm not sure, you may need to back out of sort of folks way.

A. All right. These are two films, and I see in the lower zones, we expect asbestos to be some linear lines that respond to an asbestos condition and, similarly, this is another one of his films, and actually it's out of this area that's more important.

Q. All right. Let's back up a minute. The thing I find confusing. All of this business in here you said is blood vessels?

A. Yes, sir.

[91] Q. And that's normal here, here and here?

A. Yes, sir.

Q. Where is it you look for markings that are not normal blood vessel markings to determine if scarring is present?

A. If you see some changes in—these areas are usually—for black lung and silicosis, it's usually the upper portion of the lung, and asbestos is usually the lower zone. So, he had some definite—you will see some streaks out here, but then there is under these some fine markings.

Q. All right. So, if we look out at here on the normal film, all of this in here is normal and then when you move out here on the edge, there's really not much?

A. You don't see anything on a normal film out here on the edge, and that's where it's sort of the contrast of these films are most important.

Q. On the other hand, if I point—let me hold the pointer. If I point, this right here is a rib, right there or is it right in there?

A. No, that's the—rib.

Q. Okay.

A. Because actually what you can do, Jack. This is a rib coming around and this is a rib coming and this [92] is a rib coming from the back and right here in this window is lungs showing through and through and through that window a lung through and through and that is where you sort of look if you don't want the ribs to get in your way.

Q. So, all these markings out in here, in your opinion, are what?

A. Are asbestos disease markings.

Q. As compared to—could you put your hand over what we're not supposed to look at?

A. Well, (inaudible).

Q. Cover up on that and let's take—

A. Over this.

Q. Let's take the normal one.

A. I'm going to have you focus in that—

Q. You want me to do the same thing over here?

A. Yes, that's much better.

Q. We're looking—

A. We're looking around this edge here.

Q. And here?

A. And right here (indicating).

Q. That's normal?

A. Yes, sir.

Q. That's Mr. Vance in the middle?

[93] A. Yes, sir.

Q. Now, I think we got some folks still kind of looking. Can everybody see what we're doing?

THE COURT: If any of you would like to get closer, please just step up.

MR. RION: I was just asking if we were in anyone's way.

COURT REPORTER: Am I in your way?

THE COURT: We'll recess now for lunch and resume at 1:05, five minutes after one.

(WHEREUPON, a recess was taken for lunch after which the following proceedings were had.)

MR. RION: Do you want me to proceed, Judge?

THE COURT: Please.

BY MR. RION:

Q. Dr. Gaziano, when we ended for break, we were looking at chest x-rays on Mr. Vance and I think—have you shown us both chest x-ray? There were two that you stuck up.

A. Well, they were actually the same time.

Q. They were done at the same time?

A. Yeah.

Q. Let me just ask you, when you showed us how to [94] look out into the side areas of the lung for x-ray signs of scarring and showed us that.

A. Yes, sir.

Q. Could you come down and now show us based on this drawing from a medical text what portion of the scar tissue shown in this particular drawing would correspond to the areas of fibrosis you noted on the x-ray. You understand that this is just an illustration from a medical text and is not any particular individual's lungs in this sketch.

A. One of the reasons you can see it so much better in the periphery that you're going through the lung tissue. The basic area that we were focusing on would be this area down in here, and basically what this is trying to depict is up here, this area up here is the area that's normal and asbestos tends to be a disease of the lower part of the lung, and scarring is this white material which is a scarring reaction to asbestos and it comes together to form larger and larger bands of tissue. So, there is scarring in the lung portion and that's his sister, form 2, and this is actually called honeycombing. It's a sign of advanced asbestos disease, but these large thickened bands

are the diseases of asbestos and the pleura changes are of plaques and this [95] is actually if the lungs were removed and you were just looking at the chest along the ribs you're seeing the white raised area that's really scar tissue and that's called plaques, so then you can see that same thickening depicted here in a schematic drawing. This is not a photograph.

Q. So, the little lines that you showed us out here in the periphery of the lung would be representative of the scarring process that you've shown us, this in white here?

A. Yes.

Q. Okay. Thank you. Let's talk now about Mr. Butler?

A. Who?

Q. Mr. Carl Butler. When did you see Mr. Butler?

A. I saw him on 10/30/97.

Q. Did you interview him about his potential exposure to dust?

A. Yes, sir.

Q. What do your records reflect that he told you?

A. That he worked as a plumber and a pipefitter for 33 years and retired in 1995. He worked in chemical plants, schools, firehouses, paper mills, which he was exposed to asbestos insulation working alongside [96] insulators and, also, tearing off insulation from pipes himself. He was also exposed to fly ash in coal in some of the powerhouses.

Q. So, he was exposed to both asbestos and coal?

A. Yes, sir, fly ash.

Q. Now, Mr. Butler is going to testify, I want you to assume in this case, that in addition to working in powerhouses, chemical plants and a large variety of other employment that he did work for the railroad for a period of time in that that included approximately three months of time during which he was exposed to asbestos on most days from dust created from repairing steam engines. I just want you to assume that as we go through this. On the other hand he had several decades of exposure to asbestos in other trades. So,

he's a little different than these other men who were career railroaders. He's worked all over the place.

A. All right.

Q. Worked only a relatively—compared to the rest of his employment a relatively short period of time at the railroad. Did he have from what you saw and I made some notes here about the clinical tests that we're going to through with each man. I didn't write anything about history or latency here, but did he have a [97] sufficient latent period between his exposure and now so that he satisfies that requirement?

A. Yes, sir.

Q. Now, did you take a smoking history?

A. Yes, sir.

Q. What does your smoking history reflect?

A. That he smoked eight to ten years of cigarettes about a pack a day, stopped smoking 40 years ago.

Q. That would have been in the 1960s?

A. '60s.

Q. The only thing that I'm going to do as we go through this—I think your smoking history and Dr. Renn's, who examined on behalf of the railroad, smoking history shows that he quit in 1965 or thereabout, but there's a hospital record we've got that says he smoked until 1986 and as we go through this, I'm going to ask you to assume one way and then the other, because is there any way that you can look at records and tell which one is right if one record says he quit in '65 and one says he quit in '86?

A. No.

Q. All right. So, what I'm going to do as we go through this is we take questions, I'm going to ask you [98] to assume that he quit in '65 and then I'll ask you to assume that he in '86, and we'll see if your answer differs and then when Mr. Butler takes the stand we'll have him talk about what his presmoking was, and the ladies and gentlemen of the jury will be the judge of the facts on that. Fair enough? So, I'm not going to put you in a position of deciding what his smoking

history was or was not, because there is a discrepancy in the records.

I assume you had an x-ray taken and that you reviewed it?

A. Yes, sir.

Q. What did the x-ray show by your interruption?

A. That it showed irregular and rounded capacities or spots throughout five out of six lung zones.

Q. Pardon me, Dr. Gaziano, I want you to put the correct poster that we're talking about Mr. Butler?

A. He also had pleural plaques.

Q. Were those findings abnormal?

A. Yes, sir.

Q. Were they consistent with what you would expect with dust disease?

A. Yes, sir.

[99] Q. On the x-ray, we'll put abnormal.

A. Yes.

Q. Scarring?

A. Yes, sir.

Q. Did you examine him personally and listen to his chest and look at him?

A. Yes, sir.

Q. Did you find anything significant in the exam?

A. Yes, he had rales in both lungs.

Q. That's the noise in the chest you spoke about earlier?

A. Yes.

Q. Anything else?

A. No, sir.

Q. The spirometry you talked about where you take a full breath and blow the air out and measure how much, was there any abnormality there?

A. Yes, sir.

Q. What was that?

A. There was a mild obstruction in the throat.

Q. So, it was abnormal and it was an obstruction?

A. Yes, sir.

Q. Now, is that something that you would normally see with asbestos disease?

[100] A. No.

Q Would you see it with any kind of dust disease?

A. You could see it with black lung and silicosis. They tend to have more obstruction.

Q. The DLCO for diffusing capacity, was it normal or abnormal?

A. It was normal.

Q. It was normal. Now, did you reach an opinion with reasonable medical probability about whether Mr. Butler had any dust disease?

A. I did.

Q. What's your opinion?

A. That he had a mixed dust disease, which included asbestos lung disease.

Q. So, mixed dust—you say asbestos was one of the dusts?

A. Yes, sir.

Q. What's the other dust?

A. I believe it was probably coal, coal dust.

Q. Now, here's where we'll get back to that smoking history. If we assume his smoking history as stated in your records is correct, that he quit in 1965, what would your opinion be about the cause of this [101] obstructive defect?

A. It would be related to his occupational disease.

Q. Because he's got an element of coal in there, also?

A. Yes, sir.

Q. If we go back and say that we assume that that hospital record was right and that he smoked right on through until 1986, then what would you say your opinion about the cause?

A. I wouldn't know which one it would be, whether it was dust or whether or smoking. It could have been either one.

Q. Why is that?

A. Because it produces the same kind of impairment.

Q. If he quit smoking that far back, you'd be willing to attribute the obstruction to his dust disease?

A. Yes, sir.

Q. If he was smoking through '86, you wouldn't do it?

A. No.

Q. Assuming that he smoked through '86, would you [102] be comfortable attributing some degree of his obstruction to smoking?

A. Well, I think he's got a pneumoconiosis, definite pneumoconiosis, and it's mere presence represent some abnormality and I would say, yes.

Q. That if he smoked through 1986 that his smoking probably contributes to—

A. I would think so.

Q. That's just a debate we'll resolve elsewhere because I can't ask you to resolve that. Would you in your opinion, assuming again that the smoking history is 1965 quitting, that he quit in 1965, do you have an opinion about whether his pneumoconiosis is likely to progress or worsen?

A. I think his lung disease is likely to progress, but I don't think it's very bad right now. It's very mild right now.

Q. If we assume for a minute, and I'm not saying it is, but assume for a minute that the 1986 date is the correct for him quitting smoking, which I understand changes the clinical picture for you because then you're unable to say, this is caused by his pneumoconiosis. If that's the true facts, what do you think about the likely of him progressing?

[103] A. As I said earlier, whatever the cause, once you get a certain amount of impairment, it tends to progress. The more impairment you have, the more sure it is progressing, and I don't think moderate severe impairment unfortunately there's a point where you stopped smoking or whatever and it continues to get worse almost invariably. So, it is a factor of severity, too.

Q. Can you come down and show us the x-ray of Mr. Butler and go through the same exercise we did before?

A. Yes, sir.

Q. Doctor, if you could just back off and put yourself where everybody can see past you?

A. All right. I believe there's definitely changes here, but lets equivalent the changes here of an asbestos nature, of an asbestos type. Now, I don't think you can appreciate it—

Q. Back off.

A. Give me a minute. I have to look at it closely to see these. These are little nodules right in this area. Do you see that in this corner there are little rounded nodules that are more typical of coal and sand rather than asbestos.

Q. Get that for us again.

[104] A. Okay. Well, you have to get close and you have an area about the size of a half-dollar, there are within that nodules—do you see that? There's three one right after the other, that one, that one, and that one. There are all nodules around here. That's why I included—this side had—

Q. Coal?

A. Coal. Now, the other thing about this man's film and I want to show the jury some pleural changes.

Q. Well, do one quick thing before this film, Doctor. Let's do the same thing we did before about the part—there's a part that asbestos is in, what part of the lung?

A. The lower part of the lung.

Q. Well, let's block off—you block off what we're not supposed to look at.

A. Yes, I think so. I would look down in this lower zone—

Q. Compare normal, which I'm on the normal, right?

A. Right.

Q. You blocked off the abnormal?

A. Right. Here's some of them as well as you're looking at, at this area right here.

[105] Q. You already said there was another film that shows that on it?

A. I'm going to show the standard film. This standard film shows the pleural plaques and that's another manifestation of asbestos. Now, this is the pleural plaques and if you could look at this line right here is the inner edge of the ribs. There's not supposed to be a line beyond the inner edge of the ribs and right here is a plaques that the standard film tells you that this is not the patient and here's one that's designed just to show you the plaques and what it looks like on x-ray. This thing right is one of those white plaques that goes around the side of the chest. Now, here is a plaques. It's about a quarter of an inch. Each one of these represents a plaques and you see this is again the inner margin of the ribs and if you look in the inner margin of the ribs you shouldn't see any lines. There is a line right there, so that's a plaques. Here's another plaques and this one has little flecks of calcium in it. Do you see that sliver. That's calcium deposits in the plaques. Now, calcium—if you see calcium there is plaque, even if you don't see elevation—this line right here, this black line about an inch long is a plaques and here's another [106] little sliver of it and that's on the diaphragm. Now here's another plaques that comes up about a half an inch. Now, if you saw this gentleman—this is our patient and we begin to follow and don't see anything, and here we begin to see a line and then we see a line here. Well, this line right here is a good three quarters to an inch.

Q. Tell us how that compares with the normal?

A. Yeah, here's the normal film. Now, here's the normal inner table that there is not any line. It is completely and here's the patient, a line, here is this line. Here is this line here that was a plaques and so forth. There's also plaques over here. It's not quite as clear as this one. This one is very clear, but here's a line coming up right here and it sort of fades out. Some of these fade out. Just like this one. This one comes out and fades out in the standard film and it's the same

way this one fades out and this one sort of fades, but this one is fairly demarcated. Is that it for this?

Q. Yes. I want to ask you about a couple terms, Doctor, that appear in the medical records regarding Mr. Butler. When we see the term, COPD, what does that usually mean?

[107] A. Chronic obstructive pulmonary disease. It's an obstruction to flow.

Q. That's where you said the spirometry showed obstruction, the same deal?

A. Yeah.

Q. In most people, the most cause of that is what?

A. Cigarette smoking.

Q. That's why you were saying that if he really smoked up until 1986, if he's got COPD, smoking is probably a big factor?

A. I would think it's important, yes.

Q. Now, if you see the term on x-rays, interstitial fibrosis, what does that mean?

A. Well, that means there are changes in the lungs that are linear and there are many causes, one of which is asbestos. So, in order to determine what interstitial markings means, you really—you've got somewhere other than just the x-ray.

Q. Need a history?

A. Need a history. You have to try and figure out what it is, and so when you have interstitial markings of this type and a history of this type, then you must presume that it's due to asbestosis because [108] that's what the ATS book on occupational diseases require.

Q. Is asbestosis a form of interstitial fibrosis?

A. Yes, sir.

Q. Is it the same or different than chronic obstructive pulmonary disease?

A. It's very different.

Q. You said that the American Thoracic Society has stated that if you have interstitial fibrosis and asbestos exposure you have asbestosis?

A. Well, it's sort of like that. If you don't have any good other explanation and you have a good occupational history then that's what's required.

Q. I'd like to ask you about the statement when you were talking here on the diagnosis of nonmalignant diseases due to asbestos?

A. Yes, sir.

Q. Could you put this on the—

THE COURT: What do we have there for the record?

MR. RION: It's the American Thoracic Society 1996, the diagnosis of nonmalignant diseases related to asbestos, official statement of the American Thoracic Society.

[109] THE COURT: Which page?

MR. RION: The last page of the text not counting the bibliography.

BY MR. RION:

Q. Given a clear history of exposure to asbestos, a diffused interstitial fibrosis can be presumed to be due to asbestos if other forms of interstitial fibrosis are relatively uncommon. The prevalence of lesser degrees of interstitial fibrosis is not well known and considerable caution must be exercised in attempting to attribute all such phenomena to asbestos exposure either nominal or (inaudible) and is that what you were talking about, that asbestos is a form of interstitial fibrosis, but you need a history to make the diagnosis?

A. Yes, sir.

Q. Now, the reason I'm asking about all this is it relates to Mr. Butler's medical records.

MR. RION: This is the Department of Imaging Reports from Princeton Community Hospital dated 4/13/93, and I move its admission.

MR. ADKINS: No objection.

THE COURT: It will be received.

(WHEREUPON, the document referred to was marked for identification purposes as [110] Plaintiff's Exhibit No. 6 and received into evidence.)

BY MR. RION:

Q. Do you have a copy of this, Doctor?

A. Yes.

Q. 4/13/93 comparison to 9/9/90. No significant interval change has occurred in the appearance of the chest which demonstrates *changes of COPD*. Let's stop for a minute. COPD is an obstructive lung disease you talked about earlier?

A. Yes, sir.

Q. All right. Comma, mild basilar fibrotic changes in left ventricular prominent. Now, basilar means what, Doctor?

A. In the lower zones.

Q. And fibrotic means what?

A. Scarring.

Q. Is basilar fibrotic changes scarring changes in the lower part of the lung what you'd expect to see?

A. That's what I just showed you.

Q. Let's move down to the bottom. Impression: Four full chest without acute pulmonary disease? What does acute mean?

A. It means sudden or short term.

[111] Q. *Chronic Obstructive Pulmonary Disease* and that's similar to what you said you diagnosed by spirometry, is that right?

A. Yes.

Q. Basilar interstitial fibrosis, is that what you've shown us here on the chest x-ray, basilar interstitial fibrosis?

A. Yes, sir.

Q. Thank you. That's what the American Thoracic Society says that if you've got that pattern on chest x-rays and if you've got a history of exposure it would be presumed to be due to asbestos because according to them other forms of fibrosis are "comparatively" rare?

A. Yes, sir.

Q. Does Mr. Butler, in your opinion, have an increased risk of cancer?

A. Yes.

Q. Does that include a risk of mesothelioma?

A. Yes.

Q. And lung cancer?

A. Yes, sir.

Q. Would it be the same with all of these gentlemen that the mesothelioma risk is due solely to asbestos, but the lung cancer risk if they smoke is due [112] to some combination of smoking and asbestos?

A. Yes.

Q. Now, if he quit smoking in '65, what would you say about his risk of lung cancer from smoking?

A. It would be very, very low, very tiny.

Q. If he quit in 1986, what would you say about it?

A. Well, it's still relatively small.

Q. Should Mr. Butler, as we said before, have medical monitoring to monitor the possibility of progression of his lung disease or for his cancer risk?

A. Yes, sir.

Q. Let's taik next about Mr. John Shirley. When did you see him?

A. I saw him on November 15, 1997.

Q. What did you learn about his exposure to dust?

A. He worked for the railroad as a laborer from 1947 to '51, he moved freight at the freight house, which is under the transfer shed in which he was exposed to bags of asbestos dust and asbestos rolls. He was a clerk from '51 to '76 in a

yard office and at time went out in the yard around steam engines and in checking cars. He was also exposed to sand when the engines were braking within the yard.

[113] Q. Are you familiar with that type of exposure where you have silica exposure from the braking process?

A. Yes, sir.

Q. Did he satisfy the latency that there had been sufficient time passed?

A. Yes, sir.

Q. Did you take a smoking history or see whether he had smoked?

A. Yes, I did. He had never smoked.

Q. So, smoking is not an issue in this particular case?

A. No, sir, it is not.

Q. Did the physical exam show anything of consequence?

A. He had rales in both lungs.

Q. On some of these gentlemen, Dr. Gaziano, and I'm not sure exactly which ones, we're going to have records showing that you heard rales and Dr. Renn is going to report he didn't. What do you make of that?

A. I believe I'd stick with my findings. That's what I make of it. I heard rales, because I don't write it down unless I hear it.

Q. I don't guess you can really comment on whether he heard it or not?

[114] A. No.

Q. What did the x-ray show?

A. He had rounded and irregular in both lungs.

Q. Is that abnormal?

A. Abnormal for fusion.

Q. Abnormal?

A. Yes, sir.

Q. Is this the kind of abnormal you'd expect with what type of dust?

A. Asbestos and sand or coal.

Q. All right. The spirometry test; what did it show?

A. It was normal and lung lines were normal. The diffusion was moderately reduced.

Q. What was the percentage?

A. Sixty-five.

Q. Anything below eighty is considered abnormal?

A. Yes, sir.

Q. So, he's—you would write that impairment as what category?

A. Moderate.

Q. Did you make a diagnosis?

A. Yes, I did, with Dr. —

Q. I picked a bad example.

[115] A. But I also—

Q. Some of these there is a variation?

A. Oh, yes.

Q. Did you reach an opinion with reasonable medical probability about whether Mr. Shirley had any disease caused by dust?

A. I believe he definitely does.

Q. What's that diagnosis?

A. That he has mixed dust again with a moderate amount.

Q. Mixed dust, asbestos and sand?

A. Yes, sir.

Q. Or silica is probably the more—

A. Silica, sand; the same thing.

Q. In your opinion with reasonable medical probability, is his railroad employment the cause of that?

A. Yes, sir.

Q. And you know, I need to back up. I'm going to apologize because I just forgot to ask you and this is an important question. Let's shift gears just a minute before—go back to Mr. Butler who only had three months of exposure on the railroad.

A. Okay.

[116] Q. Remember he's got several decades in other employment. Let me ask you an obvious question. Would hs decades of employment outside the railroad have contributed to his asbestos disease?

A. Yes, Sir.

Q. If he worked for and I want you to assume that this is what he's going to say; that he worked for three months—he worked for the railroad longer than three months, but there is a three-month period of time during which most days he worked around asbestos dust created by disturbing insulation on steam engines. In your opinion would that be not the only cause, but would it be a contributing factor to his dust disease?

A. Yes, Sir.

Q. But obviously, the other exposures in other industries would have been a bigger contributor?

A. Absolutely.

Q. I didn't mean to interrupt our flow by shifting back and forth, but I just flat forgot to ask it.

In your opinion, is Mr. Shirley—is his lung disease, specifically his dust disease, likely to progress?

A. Yes, sir.

[117] Q. Why is that?

A. He's already has quite a significant impairment from it.

Q. By impairment, you're referring to this DLCO test?

A. Yes, sir.

Q. Can you tell us whether his pulmonary impairment caused by his dust exposure with reasonable medical probability is going to be life-shortening, can you tell us that?

A. I believe it will, yes, sir.

Q. Is there anyway you can tell how much?

A. No.

Q. Can anybody do that in your opinion?

A. No, sir.

Q. Can you come down and show us the chest x-ray?

A. Yes, sir.

Q. Let me ask you while you're getting these chest x-rays together, can being in congestive heart failure cause changes that look like scarring on chest x-rays?

A. No. What it can do if you're in congestive failure it shows some changes that might be construed—the thing about heart failure is that there is so many [118] other changes that it's generally not difficult to say that it could be the heart failure, number one. Number two, if you're in heart failure and you have changes that might be considered to be the asbestos, if you give Lasix, both the asbestos and the heart failure goes away, but it would it be facetious that the heart failure is not something that will stay. It's something that will be eliminated quickly. It can be something that goes on for years and years because then a person will be dying of it and will probably not live that long.

Q. Is it easy to tell when you examine a patient whether he's in congestive heart failure?

A. Yes, sir, I think the x-rays probably would speak the truth, but there are other signs that suggest that he's heart failure.

Q. Was Mr. Shirley in heart failure when you examined him?

A. No, sir, he was not in heart failure, and I'm not sure, but I believe his heart failed because he needed a heart valve, and after he got him a heart valve which you can actually see from the side view—this little ring thing here. He had a heart valve put in in '95.

[119] Q. Well, he knew he—

A. These are the surgical clips from having had the operation.

Q. But he was not in heart failure when you examined him?

A. No, sir. This is part of the side view and this is the—

Q. Now, I notice that this x-ray looks a little darker than your other x-rays and a little darker than these standards or am I mistaken about it?

A. I think you're right. I think it's probably slightly overexposed film, and actually, if anything, that minimizes any—

Q. That's what I was going to ask you. If the film is a little darker because of the technique, does it become harder or easier to see the type scarring we're looking for here?

A. It becomes harder.

Q. Okay.

A. But I think that right in this area you can see and let's get our sheets of paper, our perennial piece of paper and see these changes in the lung, and actually he has not just—it's interesting, most of these cases the disease is clearer on the right side [120] than the left and I think that's largely because the heart is in the way, but in the upper zone, there's also changes to—

Q. Show us where you're talking about now.

A. Well, in between these ribs and you can even see through you see these little rounded opacities rounded.

Q. Is that from the asbestos forming?

A. No, that's from the coal or sand. Here you can see the effects of the surgery, the large sutures and that's the little marker for the coronary arteries. Right here is the little rounded densities where you expect to see coal dust. Coal dust is upper—right here in this area. Coal dust is upper zone and asbestos is in the lower zones.

Q. In your opinion, Dr. Gaziano, does he also have an increased risk of cancer?

A. Yes, sir.

Q. And mesothelioma?

A. Yes, sir.

Q. I believe because we're dealing with a nonsmoker, smoking wouldn't be a factor in any event?

A. No, sir.

Q. Now, let's talk about Mr. Johnson. When did [121] you see him?

A. I saw him on 11/15/97.

Q. What did you learn about his exposure to dust?

A. That he works for railroad on the right-of-way and that he operated a ballast regulator where he stops and tapped ballasts. He operated a rock cleaner with exposure to rock dust over the years. He also operated a crane and clamshell with exposure to asbestos from friction bands, clutches and brakes which were on the crane and clamshell.

Q. So, he would have primarily been exposed to what type or types of dust?

A. From '52 to '57, so he would have been exposed largely to sand or silica and to a lesser extent to asbestos.

Q. Did he have a sufficient latent period?

A. Yes, sir.

Q. How about his smoking history?

A. He smoked a pack of cigarettes a day for 30 years having stopped in 1989.

Q. Is that a significant smoking history in your opinion?

A. Yes, sir.

Q. Was there anything that was significant in the [122] physical exam?

A. No, sir.

Q. I'll just put zero for no significant findings. How about the x-ray, what did it show?

A. It showed a very minimal change of 1/0. It also showed a pleural plaques.

Q. Were the changes enough to be considered abnormal?

A. Yes, sir, 1/0.

Q. When you say 1/0, tell us what you mean?

A. Well, that's the earliest. There are three stages of occupational lung disease; Stage I, Stage II and Stage III. That's been the classical definition and the Labor Organization International wanted to sort of divide those three

stages into three other stages and so what they did, they established the Category I as a 1/1.

Q. That's this film over here that you've been showing us?

A. Yes, sir, and it's a 1/1 and then another one is a 2/2 and another one is a 3/3, so that if there are boundary films, that is between a 1 and 2, you see which one it's closer to and you designate it that way.

Q. So when you looked at his film you compared it to a 1 clearly abnormal?

[123] A. And a 0—

Q. And a 0 clearly normal?

A. A zero normal and so it looked a little bit closer to the abnormal than the normal.

Q. It was closer to the 1 than to the 0, but you considered it a 0?

A. Yes, sir.

Q. Is a 1/0 considered abnormal?

A. Yes, sir.

Q. On the other hand if we switch it around. Let's say you thought about a 1, but decided it really belonged in 0?

A. Then it would be a 0/1 probably.

Q. Okay. So, just to go through that process; if it's 0/0, it's clearly normal?

A. Right.

Q. If it's 0/1, you thought about calling it abnormal but you decided it was normal?

A. Right.

Q. Then, you switch over and do a 1/0, you thought about calling it normal but decided it's abnormal?

A. Yes.

Q. When you get to 1/1, it's clearly abnormal?

[124] A. Abnormal.

Q. I believe the last two we went through were 1/1's before we got here?

A. Yes.

Q. How about the spirometry?
A. He had a mild obstruction.
Q. Spirometry shows obstruction.
A. And a reduced diffusion, moderate diffusion.
Q. Do you know what the percentage was?
A. Sixty-four.
Q. In your opinion, what's the cause of his obstruction?
A. Coal dust and cigarette smoking both—I mean, sand dust and cigarette smoking.
Q. Can you say which you think is more important?
A. No.
Q. What's the cause of his diffusion capacity abnormality?
A. I think that's largely from his occupational lung disease.
Q. Did you diagnose with a reasonable probability occupational lung disease?
A. Yes, sir, I did.
Q. What's the diagnosis?
[125] A. Silicosis and asbestosis, mixed dust.
Q. In your opinion, is Mr. Johnson likely to progress or is his pneumoconiosis likely to progress?
A. Yes, sir.
Q. Is that again because he's in that category of patients who's developed, not just x-ray changes, but measurable impairment?
A. Yes, sir.
Q. Does he have a risk of cancer because of the asbestos component of his pneumoconiosis?
A. Yes, sir.
Q. Would any of these gentlemen, to your knowledge, have a risk of cancer because of the silica portion of their pneumoconiosis?
A. You're bringing onto an entirely new area and the answer is, yes, silica has now been established by authoritative sources as being a carcinogens or cancer-causing substance. It's very, very mild when you compare it with asbestos as a cancer-causing agent.

Q. That was my next question.
A. It's much less—it's taken long hard work to find the association, but now IARAC, which is the voice of things that cause cancer, but they had to prove that it does cause cancer.
[126] Q. Can you come down and show us the x-ray on Mr. Johnson?
A. Yes, sir. If you look at this area again and this area here and this area here, I think that it's certainly abnormal. It's not to the extent that you see here, but there is something definitely there. So, that's why he's been made a designation of a 1/0.
Q. Doctor, do you want to again put up these pieces of paper to focus us in on where we can get away from the blood vessels and into the actual scarring?
A. I think this particular area has some small like changes. Now, if we look at the right—I'll try to get a better film for you. If these were taken on the same day, they both would show similar changes, but they are borderline films.
Q. Get your file, if you would, on Mr. Ayers. Are you ready?
A. Yes, sir.
Q. When did you see him?
A. 11/15/97.
Q. Tell us about what you learned about his dust exposure history.
A. That he worked on the railroad from '48 to '62 as a yard brakeman; '50 to '62, he was exposed to [127] switching cars and going into mines; ran the steam engine and shuttled coal into the boilers. He was exposed to asbestos riding the steam locomotives. Forty-seven to '50, he worked in the repair shop with exposure to asbestos in the regular repair and refurbishing of steam locomotives; '62 to '64, he was a Ford dealer and a shop foreman and he was also exposed to asbestos in automotive repair and changing brakes. From '63

to '85, he worked in a body and paint shop with exposure to grinding bits, sand and paint dust and he was disabled from a heart attack and had to quit work.

Q. Was there any findings of significance on the physical exam?

A. He had a scar on left chest, small four-inch, and nothing else.

Q. So, as far as dust disease?

A. There are no rales.

Q. Nothing of significance on exam?

A. No.

Q. How about the x-ray, what did it show?

A. It showed a mild irregular obstruction of a 1/0.

Q. That was consistent with what type dust disease?

[128] A. Asbestosis.

Q. The spirometry, what did it show?

A. He had a moderate obstructive impairment, mild hyperinflation and a mild diffusion impairment.

Q. What was the percentage on that?

A. Seventy-nine.

Q. Anything below 81 is abnormal and he was 79?

A. Yes, sir.

Q. Did you reach an opinion with reasonable medical probability about whether he had dust disease?

A. I believe he did, yes, sir.

Q. The diagnosis was asbestosis?

A. Yes, sir.

Q. In your opinion, what is the cause of the obstruction that you measured on spirometry?

A. Cigarette smoking.

Q. Asbestos doesn't have anything to do with that?

A. I don't believe so, no. He smoked rather heavily.

Q. The diffusion impairment of 79%, what do you believe causes that?

A. Asbestos, but it could also be somewhat affected by his obstructive lung disease. It's quite [129] significant.

Q. Can you say with a reasonable medical probability that his asbestos disease contributes to that?

A. Yes, sir.

Q. But you think the smoking also could?

A. It could contribute, yes.

Q. Do you believe that he's likely to progress?

A. Absolutely.

Q. Does he also have a risk of cancer and mesothelioma?

A. Yes, sir.

Q. We talked a little bit about the need for medical monitoring for cancer. The same would really be true of all these gentlemen, would it not, as far as their need to have x-rays every year?

A. Yes, sir.

Q. Okay. I didn't want to have to go through that with each person. Do you want to come down and show us the x-ray?

A. Well, I believe these films show in contrast. I think in this area again, you see a line there. You see a line there. It's obvious that you don't—where it's gray, you see a similar finding here. So, you want [130] to have a—let's put a little white line and drew it through the line and it's minimal. It's certainly less than that.

Q. But you think it's closer to the 1 than the 0?

A. Yes, sir.

Q. If the members of the jury want to read the x-ray with us, the comparison really would be this closer to this or this?

A. Something like that.

Q. That's a judgment call that you're making?

A. That's a judgment call.

Q. A couple of the earlier films before we got to 1/0, you're telling us it's pretty obvious they belong in the 1/1 like the first film we looked at, for example?

A. Yes.

Q. But you're satisfied with reasonable probabilities that that film is abnormal and show scarring that you would relate to asbestos?

A. Yes, sir.

MR. RION: This is a clinical data record from Dr. Jana Peters from Princeton, West Virginia, dated 5/8/97, and I'm going to move its admission.

(WHEREUPON, the document referred to was [131] marked for identification purposes as Plaintiff's Exhibit No. 7 and received in evidence and made a part of the record.)

BY MR. RION:

Q. Dr. Gaziano, does your file have a copy of this record?

A. Is it from a—

Q. Jana Peters?

A. Yes.

Q. Do you see Mr. Ayers in the upper right-hand corner?

A. Upper left-hand corner.

Q. Now, these somewhat difficult to read scrawlings, is this typical of what a treating physician might write in records about his patient?

A. Probably better than the way I write because I can read this.

Q. We look down here in the middle of the page, there's a notation of an abbreviation of "DX". Do you see that?

A. Yes, sir.

Q. What does the abbreviation of DX in a medical record mean?

[132] A. Diagnosis.

Q. There's one that says bronchitis; number two it says sinusitis?

A. Yes, sir.

Q. Number three is what?

A. Asbestosis.

Q. Is that a diagnosis that you agree with?

A. Yes, sir.

Q. That appears to have been made in the ordinary course of medical treatment according to this record?

A. It seems that way.

Q. About the documented diagnosis of bronchitis, would you relate that to his asbestos exposure?

A. No, I'd relate it mostly to cigarette smoking.

Q. The cause of Mr. Ayers' asbestosis would be his employment where?

A. Everywhere he was exposed to it, the railroad as well as the automotive maintenance that he did.

Q. Of the two, which do you think is the heaviest and most significant from the records that you've reviewed?

A. Well, it's hard for me to say. I'm just going to say that they're probably equivalent.

Q. Okay. Let's talk about Mr. Spangler. You saw [133] him when?

A. I saw him on 11/15/97.

Q. Tell us what your records show about his dust exposure.

A. He worked as a pipefitter for the N & S, Norfolk & Southern, C & O Railroads from 1942 to '80, except for two years in the Navy. While in the Navy, he had asbestos exposure while living in submarines, on submarines. From 1945 to '80, he worked in the vac shops and roundhouse with heavy exposure to asbestos from steam locomotives and to a less extent on diesel locomotives. He also worked for a few months in powerhouses in which his exposure to insulation from pipes and steam lines and boilers. He was disabled with a back problem in 1980.

Q. Any significant findings on his physical exam?

A. There was decreased breath sounds.

Q. What's the cause of that?

A. That's chronic obstructive pulmonary disease.

Q. So that wouldn't be from dust disease?

A. No, sir.
Q. So, as far as dust disease on the exam, is zero fair?
A. Yes, sir.
[134] Q. What did the x-ray show?
A. It showed irregular opacities in the lower zones and pleural plaques on the diaphragm with calcification particularly on the right side of the diaphragm.
Q. How did you grade this one?
A. I gave it a 1/2.
Q. You said you saw pleural changes, also?
A. Yes, sir. He also has an upper lobe bulla, bullous disease in the upper lobe.
Q. That's from—
A. That's from smoking.
Q. What kind of smoking history did he have?
A. One to two packs a day for fifty years having stopped in 1993.
Q. A very significant smoking history?
A. Yes, sir.
Q. On the other hand, the evidence of scarring in his lungs you're saying was a 1/2 which you're saying is probably greater than this 1 here, is that correct?
A. Yes, sir.
Q. We'll show that in a minute. What did you find on spirometry?
A. He had a moderately severe obstruction [135] impairment.
Q. What's the cause of that?
A. I think smoking.
Q. How about the DLCO?
A. It was moderately decreased.
Q. To—
A. Sixty-six percent.
Q. Let me ask you; did you diagnose—you've already said you diagnosed obstruction from cigarette smoking. Did you diagnose any disease caused by dust exposure?

A. Yes, sir, I think the diffusion is decreased both from cigarette smoking because it's in an advanced stage with bullous emphysema, as well as asbestos.
Q. With reasonable medical probability, did you diagnose asbestosis?
A. Yes, sir.
Q. Let's take a look at this x-ray.
A. Okay. I think this is an interesting one that we can see some things on. I think this particular complete loss of markings, there's no marking here on the extreme upper zone.
Q. That's the black that you can see?
A. The dark or black in about any lung marking [136] that's—see even normally, you expect to see some lung through and that's called bullous emphysema. What that means is all the lung has been destroyed. All you have is a large cyst.
Q. That's from smoking?
A. Yes.
Q. Let me ask you. When you have this bullous emphysema from heavy smoking, Doctor, is that going to make you have more of this scarring that you look for in asbestosis?
A. No, I don' t believe it has. I don't believe it has any relationship.
Q. Those are independent, different facts?
A. Right.
Q. You look up here and you see this black loss of tissue is from emphysema?
A. Right.
Q. Now, show us the portion that you believe is due to asbestos?
A. Well, I think he has quite a bit of disease in these lower zones. Actually, I think it's more than this if you're really going to compare, and that's why I called it a 1.
Q. Well, compare it to the normal and then [137] compare it to the 1.

A. I think that's a little bit more than this, so I would grade this film 1. There's something interesting about this particular person. You see some things down here under the diaphragm next to the stomach that's clamps. So, he's had surgery in his abdomen, but not in his chest. Now, let's see—calcium is very white, chalky white, very, very white. This is a calcium in a plaques here and this is a spicula calcium in the plaques. Now, there is a thin, very white line that extends from here to here, and I don't know if you can see it from there, but it's very thin. That's a calcii plaques. This is also spicula calcium in the plaque and should be sharp like this and that means there is inflammation that's occurred here.

Q. What would be the cause of that?

A. This is a classical calcified plaques of asbestos. Almost nothing else will do that. There's calcium in the diaphragm.

MR. RION: I want you to stay down here a minute with us, Doctor. I've got a record from Mr. Spangler's treating physician that I want to have you help us interpret. This has been marked as Exhibit 8 and it's dated 8/15/95 from the Bluefield Regional [138] Medical Center signed by—reported by L. Milner, M.D. Exhibit 8, we move it admission.

THE COURT: Any objection?

MR. ADKINS: No, Your Honor.

THE COURT: It will be received.

(WHEREUPON, the document previously marked for identification as Plaintiff's Exhibit No. 8 was moved into evidence and made a part of the record thereof.)

BY MR. RION:

Q. We've gone through I believe, Doctor, what the meaning of the interstitial lung disease is?

A. Yes, sir.

Q. Again, asbestosis is an interstitial lung disease?

A. Yes, sir.

Q. If you look on—I'm going to show Mr. Spangler's just to make sure we've got the—James Spangler and the date of birth, date of exam; 8/15/95, and if we look at the findings of the impression: number one, improvement of left lung pneumonia; number two, interstitial lung disease. In your opinion, knowing what you know about Mr. Spangler, what would be the cause of that interstitial lung disease?

[139] A. Asbestos.

Q. Is emphysema as you pointed out to us, the ink-like blackness at the top is that an interstitial lung disease?

A. No.

Q. I've also got here Plaintiff's Exhibit No. 9. This is a report of consultation from Humana Hospital in Kissimmini, Florida, dated 4/13/92. We again put this in as Mr. James Spangler, 4/13/92, Humana Hospital, Kissimmini, Florida. Turn to page two. Under Diagnostic Impression: Patient has increasing respiratory distress with a low grade temperature and productive cough. Patient has had heavy dust exposure. He most likely has an acute, infectious process on top of baseline pulmonary diseases. With the patient's heavy dust exposure, pulmonary infection should be considered. Patient is currently living in a house which is approximately fifty years old.

Then it states, chest x-ray is consistent with pulmonary fibrosis. Is that a finding that you agree with?

A. Yes, sir.

Q. It also says, I suspect the patient has asbestos exposure and may well suffer from asbestos. Is [140] that again a finding that you agree with?

A. Not only do I suspect, I believe.

Q. Yes, sir.

A. Since I have information the radiologist doesn't have or didn't have.

Q. This is again a record which appears to have been generated in the course of his treatment?

A. Yes.

Q. Do you believe Mr. Spangler's asbestos lung disease will progress?

A. Yes, sir.

Q. Do you think he has enough pulmonary impairment from his combined asbestos and smoking to be life-threatening or not?

A. Yes, sir.

Q. You do?

A. Yes.

Q. I believe that's all I have on Mr. Spangler. Hold on a minute, Dr. Gaziano, I need to consult with my colleagues and see how much more I need to ask. I'm about ready to quit.

What do you charge to appear in Court?

A. Three hundred and fifty dollars an hour.

Q. You've been doing work like this where lawyers [141] send you cases and not just lawyers, but lawyers and other entities send you cases and you've got to look at the individual and say, well they've got dust disease for how many years?

A. Well, since I've been in practice since 1969, I did that before as a trainee.

Q. So, you've been—

A. Since, I'd say, since 1965, over forty years.

Q. Over thirty years?

A. Well, I'm thinking about when—let's see, '65, '66, '67—yeah, you're right. I need my arithmetic changed.

Q. Yes. Over the years, what percentage of your income has come from doing occupational disease evaluations?

A. Well, anywhere from 25% to 50%. In recent years, it's been heavier.

Q. How much does that average per year in actual—I'm not asking you to subtract the cost of running your office or

anything like that, the actual billings that you bill out per year for that type work on an average?

A. I think more $450,000,000.

Q. You think if you took the whole thing out, it [142] would be in the millions of dollars?

A. In the millions of dollars, yes.

Q. Then the other roughly 60% of your income over that period has come from other sources?

A. Yes, sir.

Q. That would include what type work?

A. Hospital evaluations, intensive care work, but I have also been very active in consulting with county—and the Department of Labor. Do you mean that separately or—

Q. No, I'm just talking about your total—

A. Rather than the patient care.

Q. Yes.

A. Yes.

Q. Is the amount of money you've earned over the years, Dr. Gaziano, in line with what other top specialists in specialized legal work make?

A. I would think it is, but I'm not sure exactly.

Q. You're not sure what everybody makes?

A. I don't know what everybody else makes, no.

Q. I've got one question. You said that you do screenings where you'll look at a large group of x-rays out of a population of asbestos exposed people?

A. Yes, sir.

[143] Q. When you do these initial screenings and look through out of folks, over the years what percentage in your estimation have you read when you first look at a group of workers to be negative or no dust disease?

A. Well, that depends on which group I'm screening. I have screened people who have had practically none or maybe two or three percent to those who have 30 to 35%. If you screen insulators, you're going to get a very high percentage. If you screen pipefitters, boilermakers you're

going to get a high percentage. You'll get an intermediate percentage if you screen industrial electricians. Also, laborers, it depends on whether they were laborers for industry or otherwise.

Q. But you said the positive findings run anywhere from zero or say one or two percent to how much, the max?

A. Thirty to forty percent depending on who's being screened.

Q. Anywhere from one to forty percent. But any way you'd look at it, over the years the majority of the findings actually have fallen into the negative category?

A. In x-ray screenings—as a matter-of-fact, I [144] specifically prefer not to exam someone in the office unless they have a positive x-ray to save everybody—save my time and everybody else's money. There's no point in examining people who have been screened as negative.

MR. RION: I think that's all I have.

THE COURT: We'll take ten minutes, folks.

(WHEREUPON, a short recess was taken after which the following proceedings were had.)

THE COURT: Mr. Adkins?

MR. ADKINS: Yes, sir.

CROSS-EXAMINATION

BY MR. ADKINS:

Q. Good afternoon, Doctor.

A. Good afternoon, Mr. Adkins.

Q. I just have a few questions and what we're going to so that we can keep these records straight, Baker and I are sort of going to alternate with these individuals, but I don't think that this will take long. Just a few sort of general questions to start with.

When you were talking asbestos progressing, were you talking about that a person who has asbestosis has an increased risk of the asbestos progressing?

[145] A. What I mean is that asbestos at one time was considered to be progressive. Since that time, there's been some literature to show that in certain groups of people it does not appear to progress when you measure the pulmonary function. So, I've indeed seen that myself. While theoretically, asbestos disease is always progressive, I believe in the real world that there are instances where it doesn't progress very much; certainly, not enough to make any clinical difference in certain individuals who I think I've defined.

Q. Are you talking about an increased risk of that happening as opposed to saying definitely in a particular person that is going to happen?

A. Oh, I could never say definitely what's going to happen in anybody individually. Basically, it's really pretty much based upon my opinion which is based upon statistical probability.

Q. That's what I'm getting at. It's an increased risk. In other words, you couldn't say, for example, if I asbestosis, you couldn't say for certain, for example, that my asbestos was going to progress? You can say I have an increased risk of it.

A. Well, I would say that if you have a significant impairment then I believe your asbestos will [146] progress.

Q. Now, let's talk a minute about cancer risks. Cigarette smoking is the number one cause of lung cancer in the world, I guess, would you agree with that, or at least in the United States?

A. Or in the world as well.

Q. If you have a person who has been occupationally exposed to asbestos but is not a smoker, what is the risks?

A. Of cancer?

Q. Yes, of lung cancer.

A. Never smoked?

Q. Never smoked.
A. Never smoked.
Q. Just occupationally exposed to asbestos.
A. It's about five times a nonsmoker which has a rate of a half percent of a nonsmoker, so that would be about 2 1/2%.
Q. I understand that if you're a smoker and asbestos then that risk goes up?
A. It goes up astronomically, yes, sir.
Q. So, it's really fairly rare, then, to see in a person who is occupationally exposed to asbestos who has never smoked that person to develop lung cancer?
[147] A. I said it's about 2 1/2%, one out of forty.
Q. Now, we talked about the American Thoracic Society, and I think Mr. Rion had you, and I think they put it up on their screen here, read from that. I wonder if we could mark this as exhibit 1.

(WHEREUPON, the document referred to was marked for identification purposes as Defendant's Exhibit No. 1.)

BY MR. ADKINS:

Q. Doctor, I hand you this and ask you if you recognize what that is?
A. Yes, sir, I do.
Q. Could you tell us what it is, Doctor, just generally?
A. It's a statement by the American Thoracic Society by a panel of physicians and it's entitled *Evaluation of Impairment Disability Secondary to Respiratory Disorders*.
Q. Is that authoritative, Doctor?
A. Yes, sir.
Q. Is that something that you relied on, I take it, that you read from it earlier?
A. I'm very familiar with it, yes, sir.

MR. ADKINS: At this time, Your Honor, I move [148] the admission of Defendant's Exhibit 1.

MR. RION: I believe this is falls within a category of documents known as one of learning treatises and there's a West Virginia Rule, 800 series, that states as I understand that it can be—it's in evidence and can be shown to the members of the jury and shown to the doctors, yet it's not ruled into evidence as other documents. I assume that Your Honor has treated articles that way in past cases and we'll treat it that way in this case. So, I believe it would be under that Rule.

MR. ADKINS: Yes.

THE COURT: It will be admitted.

MR. RION: No objection under that rule.

(WHEREUPON, the document previously marked for identification as Defendant's Exhibit No. 1 was received in evidence.)

BY MR. ADKINS:

Q. Doctor, would you turn to the last page or next to the last page, I'm not sure. Yes, Summary, there is, I think, a list of criteria for the diagnosis of asbestosis, is that right?
A. Yes, sir.
Q. Would you just go through those for me, [149] please, Doctor?
A. The summary of what is required?
Q. Yes.
A. All right. A reliable history of exposure; an appropriate time interval between exposure and detection; and furthermore, we regard the following clinical criteria to be a recognizable value: chest, evidence of Type STU, small irregular opacifications of a profusion of 1/1 or greater, a restrictive pattern of lung impairment of the forced vital capacity below the lower limit of normal, a diffusing capacity below the lower limit of normal, bilateral lay or pain and expiratory crackles of the posterior lung base not clear (inaudible).

Q. Yes. Now, those are the criteria that the American Thoracic Society says that a doctor in looking at or examining patients with asbestos is what he should look for in making a diagnosis of asbestosis, is that correct?

A. Yes, sir.

Q. Thank you, Doctor. Is asbestos a restrictive disease?

A. If it gets to a certain stage, it will be restrictive. If it gets that bad, then it's [150] characteristically restrictive.

Q. Is it ever obstructive?

A. That's a good question and one in which I think that it is. I think it's uncommonly obstructive, but there is now information in the literature in a couple studies that indicate that it can be obstructive. I personally ascribe most obstructions to cigarette smoking and rarely would I say that's the case unless there is strong evidence that there was no other evidence.

Q. Let's talk about—get your file, if you would, Doctor, of Clifford Vance. Do you have those records, Doctor?

A. Yes, I do.

Q. As I understand it, you saw Mr. Vance on two occasions. You saw him on December 2, 1995 and November 15, 1997?

A. Yes, sir, that's correct.

Q. In your history of December 2, 1995, you had a history of chronic bronchitis and then I notice on your history of November 15, 1997, there was no mention of chronic bronchitis. Had that cleared up?

A. Well, what happens is I have the individual fill out a form and each time they come in and it's [151] placed in the medical history and possibly one time it was indicated that it was present and one time it wasn't. In 1995 it was indicated. He stated that he had it.

I make my own definition, though, by taking a history of cough and expectoration, and then once they—this is 1995. Let me find the questionnaire on the most recent one. Here it is. In 1997, he did not mark that he had chronic bronchitis, so

that's the reasons for that discrepancy, and, also, he said that he did not cough up phlegm in 1997.

Q. Do you think chronic bronchitis or a history of that is from his cigarette smoking?

A. I believe if you have chronic bronchitis and smoke, then I believe that would be the basis of it, yes, sir.

Q. He had a smoking history of one to two packs of cigarettes a day for approximately 48 years, so would that equate to roughly getting close to a 100-pack years? If he smoked 2 packs a day for 48 years, that would be what, 96—

A. I think I have one—

Q. The first time I think he says one to two packs and the second time, he says one to one and a half [152] packs?

A. Yes, sir. I think he's—I would estimate around 60-pack years, 60 or 70.

Q. Is that a significant smoking history?

A. Yes, sir, it is.

Q. What would be the average you would say you would see in people? Is there sort of an average smoking history of a regular smoker?

A. You know, there are those who smoke heavily and those who smoke moderately. Surprisingly, most people smoke about a pack a day, but there is a significant number who smoke two packs a day and a lesser number who smoke a half a pack a day.

Q. Now, in your examination of him, did you find any crackles or rales that you talked about earlier in him?

A. Yes, I did.

Q. You did?

A. I did.

Q. Was it bilateral or on one side?

A. They were on the left.

Q. Just on one side?

A. Yes, sir.

Q. Number four of the ATS guide that we read [153] earlier requires bilateral. Do you agree with that?

A. They recommend bilateral, but all those are recommendations as to a quorum, but unilaterally is also important and is present—

Q. In any event, you didn't find bilateral, is that fair?

A. That's correct, yes.

Q. What was your x-ray reading on—did you x-ray both times that you saw him in '95 and '97?

A. Let me see whether I did. Yes, sir, I believe I did.

Q. Was there—from looking at your records there, was there any change or did you change your reading in any way from '95 to '97 in his x-rays?

A. The '97 was—I'm sorry. It was a little worse in '97, yes sir.

Q. Did you classify him differently?

A. I classified—I'm sorry. The '95 film was at another institution. It was from Bluefield Regional Medical Center and the one in '97 was in my office, and I also did another one in '97 in my office.

Q. My question was whether from the '95 to the '97, did you change your classification of the films that you read?

[154] A. Yes, sir. In '97 it was a little worse than in '95.

Q. How did you classify it?

A. One is a 1/1 and the other one in '97 was a 2/1.

Q. Now, let's talk about the PFTs for a minute. Was there any changes in the PFTs between the '95 and '97?

A. In '95, the PFT was a little less than the one in 1997. That was the difference.

Q. So, basically, they were the same?

A. They were similar.

Q. Now, looking at your 1997 PFTs there, I notice and you indicated, I think, on direct examination that you didn't think that Mr. Vance had any measurable impairment from his smoking as I recall, is that correct?

A. Yes, sir.

Q. Now, looking at the PFTs and the residual volume, is that a little high or not?

A. Not really, not significantly.

Q. Is it up some?

A. No, I would think this was within the acceptable range of normal.

[155] Q. Insofar as the diffusing capacity goes, and I know Mr. Rion asked you about this, but if we use the correction that he asked you about, his diffusing capacity would be normal, is that correct?

A. His corrected diffusion for alveolar volume is normal, yes.

Q. So, in other words, his diffusion capacity corrected is normal?

A. Yes, sir.

Q. Now, Doctor, in terms of impairment—when you say impairment, are you talking about disability?

A. No.

Q. Tell me the difference between impairment and disability so the jury understands that?

A. Impairment means that you have disease that affected your lung by certain amounts and disability means that it's affected your system to an amount that prevents you from doing work. So, disability can vary from individual to individual.

Q. So, when you say someone has impairment, you're not saying that they have disability from doing work, for example?

A. That's right.

Q. So, I take it, Mr. Vance, then, doesn't have [156] any measurable disability from the standpoint of doing work with this mild degree of impairment that you saw?

A. Well, unless he was a very heavy worker, I would say he's not disabled.

Q. Well, he's how old?

A. It really doesn't matter. These values are all age-corrected. So, he would not be considered disabled from his usual work. That's probably the best way to say it.

Q. That was my point. In other words, these would be for a 76-year old person. They've corrected for that, and this would not prevent him, for example, from doing things that a normal 76-year old man ought to be able to do, assuming he was otherwise healthy?

MR. RION: I want to object to what a normal 76-year old man, because I know a 76-year old man who likes to water-ski.

BY MR. ADKINS:

Q. I think average daily activities of most 76-year olds that we know, he could do all of that?

A. Yes, sir.

Q. That's my point. There's no impairment from doing everyday activities.

A. I'll accept that as saying, yes, that's true.

[157] Q. Did you find any restrictive pattern on his lung impairment?

A. No, sir.

Q. Did you find any impairment in his forced vital capacity?

A. Yes, sir.

Q. Those are also on the list of ATS criteria that I gave you. Those are also on that list, is that not correct, Doctor?

A. That list says these items are important and it doesn't say that all items have to be present and that's specifically what it says, that they all don't have to be present. Only two are essential and that's exposure and latency and could be any one or several of the others that are important to making a diagnosis.

Q. Yes, sir. I understand your position. My question was, did you find those things in Mr. Vance and I think the answer was you did not, is that correct?

A. I found certain things in Mr. Vance. I found positive—

Q. I understand that.

A. But I didn't find a restrictive impairment.

Q. That was my question. My question was, did you find a restrictive pattern or any problem with his [158] forced vital capacity and I think the answer was no, is that right?

A. That's correct.

MR. ADKINS: I believe that's all I have on Mr. Vance. Thank you.

THE WITNESS: You're welcome.

MR. ADKINS: I'll let Mr. Baker take the next individual.

MR. BAKER: Good afternoon ladies and gentlemen of the jury. I haven't had an opportunity to introduce myself to you. I'm Rodney Baker and I am with Mr. Adkins. I know I haven't done much yet, but I appreciate the opportunity to speak before you.

BY MR. BAKER:

Q. Good afternoon, Dr. Gaziano. I don't think we've met before today, have we?

A. Nice to meet you, sir.

Q. Just a few questions for you regarding Mr. Shirley. The first guideline on the ATS guideline criteria is a reliable history of exposure, is that right?

A. Yes, sir.

Q. I note in your occupational history section regarding Mr. Shirley, you note that he was a clerk from [159] 1951 to 1976 in yard offices and at times went out in the yard around engines working in the yard and checking cars, is that right?

A. Yes, sir.

Q. You know, at what times he went out and did that type of work?

A. No, sir, I didn't take a day-to-day log of it. I couldn't do that.

Q. Do you know what other jobs he held during his work with the railroad besides those you've listed?

A. Let me just look at the—no, sir, I don't.

Q. From his occupational history, would you please tell me what or describe to me the type of silica exposure that you think Mr. Shirley had while with the N & W?

A. Well, he said he worked in the yard and I specifically remember asking some people if in the yards there was exposure to dust and sand that could cause lung disease, and they said that there was a lot—and I said, is there like sand generated in traction.

Q. Excuse me. Was this with Mr. Shirley?

A. You know, I'm trying to give—the way I gather together information about the various work.

Q. What I'd like to know is what the source of [160] that information was?

A. Well, it came from him that he worked in the yard where sand was placed down on getting engine traction and, also, on some certain of the cars.

Q. Do you know how much of the time that he worked during that '51 to '76 period that he actually spent out in the yard versus working in a building?

A. I just knew that he was in the building part of the time and out in the yard the other part of the time, but in terms of specific division, no, sir, I don't know.

Q. As a car checker, do you know how long he would have stayed in the yard during any one of his days of work?

A. No, sir, I don't know.

Q. Correct me if I'm wrong, it was your understanding that when he worked as a car checker that's when he had exposure to sand, is that right?

A. Yes, sir.

Q. Do you know that he only worked for two to three years—I'm sorry. Doctor, I would like for you to assume for a moment that Mr. Shirley testified that he only worked as a car checker for two to three years on an occasional basis. If you accept that assumption, [161] do you still believe that Mr. Shirley's silicosis that you diagnosed as mixed dust pneumoconiosis is related to or caused by his railroad work?

A. Yes, sir, I do.

Q. Would you classify Mr. Shirley's exposure to silica working around engines that were braking as an intense exposure or just an exposure?

A. I'd say significant. I doubt if it would be considered an intense exposure, no.

Q. I'm sorry. How did you classify that?

A. I'd say I don't think it would be considered an intense exposure.

Q. What type of exposure?

A. A significant exposure.

Q. In your opinion, how many years of significant exposure to silicosis does it take to give a person sufficient exposure to develop silicosis?

A. It may take 5 weeks.

Q. That's with an intense exposure, is that right?

A. Yes, sir.

Q. I asked you about significant exposure.

A. Significant exposure—I don't know. I would think years, but beyond that I'd say I couldn't say.

[162] Q. Will you agree that in a coal miner or someone with a job like that, it generally takes eight to ten years of exposure to excessive levels of silica before that person would be expected to develop a silicosis or a coal worker's pneumoconiosis?

A. I think that it takes a few years. I don't know specifically how many.

Q. So, then, Doctor, if you assume that's true what I represented to you regarding Mr. Shirley's work as a car checker, do you think you have a reliable history of exposure, at least in regards to silica?

A. I believe so, yes, sir.

Q. Doctor, you testified that there was an appropriate interval between the alleged exposure and detection of disease, is that right?

A. Yes, sir.

Q. You believe that the x-ray findings were sufficient to make a diagnosis of some kind of mixed dust pneumoconiosis, is that right?

A. Yes, sir.

Q. Now, if I'm correct, the guidelines that we've been looking at and talking about suggest or recommend a chest x-ray evidence of Type STU, the regular opacities that would be diffusion of 1/1 or greater, is that [163] right?

A. Yes, sir.

Q. In this case, you found that the opacities were of a Q/T type, is that right?

A. Yes, sir.

Q. With the Q, I suppose, representing the predominate opacity?

A. That's right.

Q. And the T representing the secondary opacity?

A. That's right.

Q. When I say predominate and secondary, I mean there's more of the first than there is of the second, is that right?

A. That's right.

Q. Generally, in an asbestosis diagnosis, you'll have either ST or U opacities exclusively, is that right?

A. Yes, sir.

Q. You won't get the rounded opacities?

A. That's correct.

Q. Do you believe that a diagnosis of acute T-type opacities meets the criteria or the recommended criteria set forth as number 1 in the ATS guidelines we discussed?

[164] A. I think it means the criteria, but I didn't make a diagnosis of asbestosis. I made the diagnosis of a mixed dust pneumoconiosis.

Q. I think it was mixed dust pneumoconiosis including asbestosis, is that right?

A. Yes, sir, that's correct, and the reason for that is that this represents two dusts and with both dusts together it's up to 1/1 profusion. Whether one dust alone would get up to that, I have no way of knowing or no way of guessing. So, I evaluated him with what I had which was a mixed dust—opacities of a 1/1 type of profusion. We could probably talk about how many angels dance on the head of a pin and what that represents when you have mixed pattern and the best I can say is that I really don't know what it would like if there were only one opacity. So, I have to deal with what I'm given and what I was given was an x-ray picture and then I tried to explain it as best I could and an occupational history.

Q. Let me make sure I understood part of what you just told us. You don't know in looking at Mr. Shirley's x-rays that you can make a straight diagnosis of asbestosis because you can't say as you sit there today that there were enough opacities to make an [165] asbestosis—enough irregular opacities to make an asbestosis diagnosis, is that right?

A. I wouldn't know unless I could eliminate all around his lungs and then look at the film, and since I'm not able to do that, the best I can say is mixed dust pneumoconiosis including asbestosis. The other thing that I would like to say since you brought it up, if I may, having to do with a 1/1 profusion. Since that was written in '86, there has been a number of opinions related—good opinions to the point now where 1/0 is considered generally, and not generally is a standard for breathing occupational pneumoconiosis including asbestosis.

Q. You mentioned earlier that you had been the past president of the West Virginia Thoracic Society, is that correct?

A. Yes, sir.

Q. Is the West Virginia Thoracic Society connected in any way with the American Thoracic Society?

A. Yes, sir, it's a component organization.

Q. So, as a component organization, does the West Virginia Thoracic Society still adopt and follow these guidelines that you have said are authoritative?

A. Well, I'm not sure whether they do or they [166] don't because we don't spend our time discussing all these except to say that anything in medicine that is authoritative in a peer review journal has—there is an opportunity to question and evaluate and undergo a modification and what I'm saying now is that I have yet to see a study done on asbestosis, have yet to see a study done on asbestos in which 1/0 was not considered positive for asbestosis. There have been innumerable studies even by some of the members of the panel that wrote that article—

MR. BAKER: Your Honor, I'm going to object to this as nonresponsive. The question I asked was, does the American Thoracic Society adopt this as authoritative, yes, no or not sure?

MR. RION: I think he's entitled to explain because he's referencing the people who—what the people who wrote the article have said about what the standard means, and I think he's entitled to do that. I've got the literature he's relying on right here.

THE COURT: I think he should answer the question and he may give an explanation.

MR. BAKER: He's given an explanation. I'd just like for him to answer it now.

THE WITNESS: Well, the answer that I'm going [167] to give is that, no, we don't sit around and review all these because every month ATS comes out with some physician papers that we generally adopt or agree to.

BY MR. BAKER:

Q. Doctor, did you find a restrictive pattern of lung impairment with Mr. Shirley?

A. No, sir, I did not.

Q. But you did find a diffusing capacity which you believe was below the lower limit of normal?

A. Yes, sir.

Q. And you heard what you believe were bilateral rales, is that right?

A. Yes, sir.

Q. You talked about rales earlier. If you have rales in 1995, will you have them necessarily in 1997?

A. Well, it would take time for them to develop, so you may or may not and sometimes if they're restricted in location, you don't have—you may not put your stethoscope over it at that time. That's happened to me before.

Q. So, you're saying it's possible that rales can be present in 1995, but a doctor would examine someone in 1997 and not detect the rales?

A. Oh, no. I think if the rales was due to [168] asbestos, it would still be there.

Q. Doctor, when a diagnosis of silicosis is made at least based on the chest x-rays you've done in this case, is it common to see eggshell calcifications in relation to the silicosis?

A. No.

Q. It's not common, these eggshell calcifications?

A. It's not common.

MR. BAKER: Doctor, I don't think I have any further questions for you at this time. Thank you.

THE WITNESS: Thank you.

BY MR. ADKINS:

Q. Mr. Ayers, Freeman Ayers, Doctor. You saw him, I believe, on November 15, 1997, at the request of Mr. Humphrey's?

A. Yes.

Q. You took a history and in that history, I think you've already testified about this, but anyway, there was apparently exposure outside of his railroad employment at the Ford dealer, and I think you've testified on direct that you thought that was sort of equivalent between the two exposures, is that correct?

A. Yes, sir.

[169] Q. Did you find any other significant, from a medical standpoint, any other significant medical problems?

A. Yes, sir, I did.

Q. You said he had some heart problems?

A. Yes, sir.

Q. Would those heart problems cause shortness of breath?

A. A heart problem can cause shortness of breath, yes, sir.

Q. What other medical problems did you find in Mr. Freeman Ayers other than the asbestosis that you talked about?

A. He has heart trouble. He had gout. He has high blood pressure.

Q. Did you do a—on your physical examination, what do you mean when you say lungs were clear to percussion and ossification?

A. Well, it was normal. Percussion is a technique where you felt the chest to see if there's change in sound that emulates from that. If it's dull, it generally means there's fluid or consolidation. If it's tympanitic it means that there's air underneath. So, that's one method of examining. Ossification has to [170] do with listening to the lungs and listening for abnormal sounds when the person's taking a

breath in and out and rales are one of the things that you look for and maybe one of the things you see in asbestos, among other things.

Q. My question was, were his lungs clear according to what you wrote in your report?

A. Yes, sir.

Q. From that test anyway?

A. Yes, sir, they were clear.

Q. What was the chest x-ray reading on him, sir?

A. 1/0.

Q. Did you find a restrictive pattern of lung impairment? Was the forced vital capacity below the lower limit of normal?

A. No. sir, I did not.

Q. Did you find a diffusing capacity below the lower limit of normal?

A. Yes, I did.

Q. What was his diffusing capacity?

A. Seventy-nine percent of predicted.

Q. So, that's within two points, I guess, of the 81, is that right?

A. Yes, sir.

[171] Q. When you use the correction, again, it would be normal, isn't that true, Doctor?

A. Yes, sir.

Q. Did you find any bilateral laked or pin crackles?

A. No, sir, it was normal to percussion auscultation.

Q. Now, looking at his PFTs. You did find obstruction, did you not?

A. That's right. Yes, sir.

Q. How would you classify the obstruction that you found?

A. As a moderate degree.

Q. His numbers—which numbers there would you look at, Doctor, to talk about obstruction?

A. That would be 1 over FVC of 59.

Q. What was the number?
A. Fifty-nine.
Q. Normal would be, again, 80?
A. No, 67. The normal was in the predicted table.
Q. So, he's below normal in that. You said he had COPD?
A. Yes, sir.
[172] Q. That's from his cigarette smoking?
A. Yes, sir.
Q. Do you think the COPD is affecting his diffusing capacity?
A. As I said earlier, it may play some part in it, yes, sir.
Q. Doctor, I want to hand you what was introduced as Plaintiff's Exhibit No. 7 and I'm going to show you an x-ray. This is where they had asked you about the diagnosis a doctor had made about asbestosis. Look at that x-ray reading. Do you recognize the doctor that did that reading?
A. Doctor Almond.
Q. Do you know if he's a B-reader or not?
A. No, sir, I don't know.
Q. Did he make any findings of interstitial fibrosis or note any in his x-ray findings there?
A. No, sir.
Q. Assuming that he's a B-reader, would he be required to do that?
A. Well, I think any radiologist should say that what they see. So, I don't know if he's a B-reader or not.
Q. In any event, he made no comment in this [173] particular x-ray that he read about any interstitial fibrosis, is that true?
A. Yes, sir.

MR. ADKINS: That's all I have on him. Thank you, Doctor.

BY MR. BAKER:

Q. Doctor, do you have the report for Mr. Doyle Johnson?
A. All right.
Q. Once again starting with your occupational history which was taken, I guess, November 15, 1997, the date of his exam, is that right?
A. Yes, sir.
Q. Is the date of your report the date of the exam or the date you finished the report?
A. The date that I saw him was the date of the report, the same day in this instance. Not always, but it happened to be the same day.
Q. In your occupational history section or in the occupational history section and I think you read to the jury before, you indicated that he operated a rock cleaner with exposure to a lot of rock dust over the years, is that correct?
A. Yes, sir.
[174] Q. Do you know how often Mr. Johnson was involved in dumping ballast?
A. Operating a ballast regulator?
Q. Right.
A. His job was largely a machine operator for his whole time according to what was written, but he alternated from one machine to another, but specifically how long he did one machine versus another, I don't know, no.
Q. Do you know much time Mr. Johnson worked as a welder's helper and didn't work on machines?
A. No, sir.
Q. In looking at his occupational exposure, where would you believe or in doing which one of these jobs would you think he got most of his exposure to sand while employed by the railroad?
A. Oh, I think operating the ballast regulator is a very, very dangerous occupation and they just bring large volumes of unprotected dust exposure. A ballast regulator is a very

dangerous machine. Ballast can also create dust, tamping, that is the brooms as well, and the one thing about these people who do road maintenance, even if you don't operate it, you work next to someone else who operates it and they're all [175] unprotected. So, they have suitable opportunity to be exposed to sand.

Q. Do you believe that all maintenance of weigh employees are unprotected?

A. Well, I know they were unprotected.

Q. Did you ask Mr. Johnson?

MR. RION: Your Honor, I believe Dr. Gaziano was in the middle of an answer and was interrupted by counsel. So, I ask that he be permitted to finish his answer.

THE COURT: Yes.

MR. BAKER: My point is, I asked a simple yes or no question, and I get a three minute answer.

THE COURT: Let's hear whether it's going to be three minutes or not.

BY MR. BAKER:

Q. Go ahead.

A. Do I know whether he was protected?

Q. Yes.

A. I have a good idea, but I don't know specifically. I didn't ask him.

Q. That's not a question you ask people who come in for pulmonary evaluations, if they wore any type of face masks or—

[176] A. I already know the answer to that question generally because I've been talking to a number of these people over the years, and I already known the answer. I don't have to ask them if they were protected.

Q. So, if Mr. Johnson had testified in his deposition that he did wear a dust mark when he operated the ballast regulator that would surprise you, wouldn't it?

A. It would depend on when he was given the dust mask. For a period of time, I don't believe he was given a mask for that kind of work.

Q. Once again, do you think you have a reliable exposure history in this case?

A. I think I have an excellent exposure history in this case, yes, sir.

Q. You indicated that he first went to work in the early '50s, is that right?

A. Yes, sir, '52.

Q. So, there has been an appropriate interval or latency period, is that right?

A. Yes, sir.

Q. Doctor, in this case you made a diagnosis, I believe, of mixed dust pneumoconiosis including asbestosis once again.

[177] A. Yes, sir.

Q. Would you please turn to your chest x-ray interpretation report, the ILO form?

A. Yes, sir.

Q. Look at the section labeled 2B Small Opacities?

A. Yes, sir.

Q. You have marked the primary T and the secondary S, is that correct?

A. Yes, sir.

Q. Those are both irregular opacities?

A. That's right.

Q. Not rounded opacities?

A. That's correct.

Q. Didn't you tell me just a minute ago that you would have made the diagnosis of a mixed dust pneumoconiosis if you had an exposure to silica or coal and some rounded opacities?

A. Silicosis as opposed to asbestos can be low zone and can be irregular. So, I want a designation of the type of pneumoconiosis one has, one has to look at the exposure history in making that diagnosis. It's not just the x-ray. It requires knowledge of what kind of dust one was exposed to.

[178] Q. So, then if somebody—just make that a hypothetical plaintiff who worked around all kinds of different dusts and you saw irregular opacities in the lower zones, you could call it asbestosis or mixed dust pneumoconiosis depending on what he was exposed to?

A. That's exactly right, yes, sir.

Q. Did you find a restrictive lung impairment in Mr. Johnson?

A. No, sir.

Q. What was his diffusing capacity?

A. Sixty-four percentage of predicted.

Q. Did you note any rales?

A. No, sir, there were no rales.

Q. Is that the same thing as bilateral lay or pain and inspiratory crackles?

A. Yes, sir.

Q. Were you ever provided any medical records of any information on Mr. Johnson regarding to the pulmonary embolus that he suffered in 1987?

A. I didn't get any history on that, no.

Q. Would a pulmonary embolus in 1987—be consistent with the pneumoconiosis?

A. No.

Q. Doctor, I noticed in looking at your tests [179] results in these cases that you didn't perform any post bronchodilator pulmonary function tests, is that correct?

A. Yes, sir, that is.

Q. In your physical exam of Mr. Johnson, you didn't note any abnormal breath sounds, did you?

A. No, sir.

Q. You did consider a smoking history of 30-pack years to be a significant smoking history, didn't you?

A. Yes, sir, I do.

Q. I believe earlier in your direct testimony you attributed the mild obstructive impairment that you found—to the mixed dust pneumoconiosis that you diagnosed and to Mr. Johnson's cigarette smoking, is that right?

A. Yes, sir, that's correct.

Q. There's no way you can say or did you say earlier which one caused it more?

A. No, sir, I didn't.

MR. BAKER: Doctor, I don't think I have any further questions regarding this plaintiff.

BY MR. ADKINS:

Q. Mr. Spangler. Let's talk about your physical exam of Mr. Spangler for a minute. Did you find any [180] find any rales in Mr. Spangler?

A. No, sir, I did not.

Q. Did you find any restrictive pattern of lung impairment with a forced vital capacity below the normal lines of normal?

A. No, sir, I did not.

Q. Looking at his PFT's, he has a significant obstructive pattern, doesn't he not?

A. Yes, he does.

Q. That's from his cigarette smoking?

A. Yes, sir, I believe it is.

Q. He was the gentleman, I think, who had the upper lobe emphysema mass, bullous emphysema, is that right?

A. Yes, sir.

Q. That's all caused by his smoking of cigarettes?

A. Yes, sir.

Q. Do you believe that—what about the diffusing capacity?

A. It's moderately reduced, 66% of predicted.

Q. If corrected to 78?
A. Yes, sir.
Q. It would still be below normal?
[181] A. Yes, sir.
Q. Do you believe that the cigarette smoking and the extensive damage in his lungs from cigarette smoking is contributing to the reduction in his diffusion capacity?
A. To a certain extent, yes, sir.

MR. ADKINS: That's all I have, Doctor. Thank you.

BY MR. BAKER:

Q. Doctor, you talked earlier about the impact that asbestos exposure would have or had in your opinion on Mr. Carl Butler. Do you remember testifying regarding Mr. Butler?
A. Yes, sir.
Q. The part of your testimony that I want to focus on is when you made the point, I believe, that all exposure to asbestos would be akin and would to some extent cause his disease, is that correct, would cause the disease that you diagnosed?
A. Yes, sir.
Q. Doctor, obviously if he had three months work for the railroad, 33 or so, which I believe is what you noted in your history section, working as a plumber and pipefitter in powerhouses and various other industries, [182] would you, at least, believe he had significant asbestos exposure, is that right?
A. Yes, sir, I do.
Q. I'm going to rephrase my question. Obviously, if he worked three months on the railroad and 33 years in these other occupations where you believe he was exposed to asbestos, do you believe his railroad exposure played a very minimal role in the development of any asbestos-related disease that he had?

A. I think it was a minimal role. I don't know how much, but I think—am I allowed to elaborate or not or just say yes or no. You tell me.
Q. To the extent that you can answer these simple questions, I'd prefer a yes or no.
A. Well, I'll elaborate or I'll just shut up. You tell me.
Q. That's the answer I wanted you to give.
A. Well, I wanted to please you.
Q. I like to be pleased.
A. Okay.
Q. Now, Doctor, you didn't have any exposure to sand or coal dust or any other substance from Mr. Butler during his railroad employment, is that right?
A. That's correct.
[183] Q. Did you make a mixed dust diagnosis in Mr. Butler's case? You did, didn't you?
A. Yes, sir, I did.
Q. So, he had or at least the opinion you're proceeding on is if he had no exposure to coal or silica on the railroad, then that obviously didn't add to his mixed dust diagnosis?
A. That's right.
Q. Earlier you were shown a report or chest x-ray interpretation by Dr. Michael Alexander, is that correct, regarding Mr. Butler?
A. I don't recall. I've been shown so many things, I don't know specifically.
Q. I'll show you what's been previously marked as Plaintiff's Exhibit 6. Do you know who Dr. Alexander is?
A. No, sir.
Q. You don't know his qualifications, either?
A. No, sir.
Q. You didn't find a restrictive pattern of lung impairment with a forced vital capacity below the lower limit of normal, did you?
A. No, sir.

Q. I believe Mr. Butler's diffusing capacity with [184] carbon monoxide was normal, is that right?

A. That's right.

Q. In Mr. Butler's case, the only type of breathing damage you found was a mild obstructive ventilatory impairment, is that right?

A. Yes, sir.

Q. Do you think the mild obstructive ventilatory impairment that you diagnosed Mr. Butler with would keep him from engaging in the normal activities of life?

A. If you define normal activities as what's usual for someone his age, I would think that it would not impair him. No, sir.

MR. BAKER: Thank you, Doctor. I don't think I have any further questions.

REDIRECT EXAMINATION

BY MR. RION:

Q. Just a little follow-up. On the American Thoracic Society statement that we went over earlier, I believe, Defendant's 1 and 2. Can we put this on the—

A. Yes.

Q. Where the numbers begin under the summary right there, okay. Are you familiar enough this that if I read it you know where I am?

A. Let me just say this; I could read the whole [185] thing from here without looking at it.

Q. Come on up and let's get number one—stop. I want to read—it says, in our opinion it is necessary that there be, number one, a reliable history of exposure and, number two, an appropriate time interval between exposure and detection. Now, the appropriate time interval, is that what we call latency?

A. Yes.

Q. Now, when it says, it is necessary, what does that mean?

A. Well, that's absolutely necessary before I can even think about an opinion is you have to be exposed to the dust, harmful dust, and then it has to be a long enough period of time before it can develop.

Q. So, the two things you've got to have are listed under necessary?

A. Yes, sir.

Q. Now, let's keep going. Furthermore, we regard the following clinical criteria to be of recognized value. So, then they—how many is this, one, two, three, four, four different things of recognized value. Are they saying that you have to have all four of these?

A. No, sir.

Q. That's why you've got one and two that are [186] necessary and then you move on down to helpful for the next four, correct?

A. Absolutely.

Q. That includes—we went through that. Basically, on almost all our cases we had the chest radiograph.

A. Right.

Q. The restrictive pattern by and large we didn't have?

A. That's right.

Q. Then, diffusing capacity we had in practically every case?

A. Right.

Q. Then, bilateral rales we had in some and not in others?

A. And sometimes it was unilateral, but again even if the unilateral and you've got an x-ray and they did the work, you have to ask yourself, why are those rales there. They don't belong there. They're not normal.

Q. Really, if you've got nothing but number one and two that were necessary, exposure and latency, and the chest x-ray, that would be enough?

A. Right.

[187] Q. Now, I want to ask you about this 1/1. You said something about that in every study you've ever seen, a 1/0 has been recognized as abnormal for asbestosis, is that correct?

A. Yes.

Q. Are you familiar with the fact that one of the authors of this very statement has written a letter about this issue of whether a 1/0 is, in fact, sufficient?

A. Yes, sir.

Q. This is, for the record, diagnosis of asbestos-related disease, a letter from Hans Wile one of the authors of the statement, dated June 1987, and if we'd start at the bottom of page one, it says, "No one category will constitute the lower limits of abnormalities which is diagnostic of asbestosis for all qualified readers. For one reader this level will be more or less equivalent to an ILO reading of 1/1 for irregular opacities or another 1/0. So, is it saying here, Doctor, that a 1/0 can be sufficient?

A. Can I expand on that or just say, yes.

Q. Well, it might be better for you to say yes or no.

A. Yes.

[188] Q. It says here that it is unfortunate that some readers have interpreted the ACCPATS statement, and that's what we just looked at, right?

A. Right.

Q. To suggest that a reading of at least 1/1 for small opacities is required to support a diagnosis. Now, do you agree with that unfortunate suggestion?

A. It is very unfortunate and it is no longer considered.

Q. That's one of the authors of the statement?

A. Yes, sir.

Q. You were asked about a couple of these gentlemen being able to perform the normal activities of daily life for someone their age. Does that include things like getting dressed, bathing, taking a walk, that type thing?

A. Yes.

Q. Those are the things they can do, correct?

A. Yes, sir.

Q. But they still have, at least, the gentleman who has the DLCO impairment, still has some impairment in their lung function when they go about?

A. Well, no one has asked me about him. He's got a lot of impairment.

[189] Q. I'm just talking—

A. That individual has a lot of impairment.

Q. Yes, sir. I'm—

A. He probably couldn't do ordinary daily things.

Q. But even the gentlemen who can do daily activities do have measurable lung impairment?

A. Yes.

Q. According to the tables that we've talked about, you'd have to be as bad as the worse five percent to have any measurable abnormality at all of the subject population that's studied to set the tables?

A. Yes, sir.

Q. For those who've developed that much impairment, in your opinion, those with any degree of measurable impairment, their impairment will probably worsen over time?

A. Yes, sir.

Q. Now, we've referred over and over—not over and over, but a couple of time, to the so-called corrected diffusing capacity. Again, I want to make sure that everybody understands that if we take somebody and remove a lung, they're corrected diffusing capacity is going—so-called corrected—we can have corrected, but it's corrected for loss of alveolar [190] volume, right?

A. Yes, sir. Is it appropriate for me to expand that with a marker.

Q. I think we've been through it once. Everybody sort of has the idea and, again, just a reminder, if you lose one lung corrected for alveolar volume, your so-called corrected diffusing capacity would be?

A. A hundred percent.
Q. A hundred percent?
A. Yes.
Q. So, if we want to measure impairment do we use the corrected for alveolar volume diffusion?
A. No, you use the absolute diffusion.
Q. This will be an issue, Dr. Gaziano, and will have to be resolved as Mr. Butler testifies, but if he had exposure to significant airborne respirable silica or coal at the railroad, would to the extent that he had the exposure, would that have been some contributing factor, however slight, to his pneumoconiosis?
A. Yes, sir.
Q. He'll testify hopefully in a few minutes. Certainly any asbestos exposure would have contributed to the asbestos component of that?
A. Yes, sir.

[191] MR. RION: That's all I have.

THE COURT: Thank you, Doctor.

THE COURT: Folks, we'll take ten minutes.

(WHEREUPON, a short recess was taken after which the following proceedings were had.)

THE COURT: I was trying to get terms identified and I failed to get a couple of them identified and a couple of jurors asked about them. It's forced vital capacity and FEV1.

BY MR. RION:

Q. Dr. Gaziano, I'm going to get you to define what FVC and FEV1 are just to help clarify this. I think Mr. Adkins and me may have been at different points talking about the same things, but using different terms.

When you and I went through the cases, remember we used the spirometry at different points; that I would write down,

history, x-rays, spirometry, diffusion. Is the FVC and FEV1 part of the spirometry that me and you were talking about?
A. Yes, sir.
Q. Could you define what the FVC and the FEV1 are?
[192] A. Let me just show it. A picture is worth a thousand words and they won't forget the picture.
Q. Do that.
A. Well, basically spirometry—

MR. ADKINS: Unless I'm mistaken, that's not one of the markers for that board.

MR. RION: These?

MR. ADKINS: Yes.

THE WITNESS: The way you do spirometry is you take—you're connected to a breathing machine that has air in it and it has a ballast that goes up and down and it has a marking pen that marks. So, when you suck in the ballast goes down and when you blow out the ballast go up and it moves on a rotating drum. So, what it does on this rotating drum—as it moves around it marks out. So, here the drum is not moving and you're asked to take in a deep breath. Then they start the drum rolling and then they ask you to blow out as hard and as fast as you can and you'll get a line like that, and there are lines like this on that and then there are lines like this.

Now, FEV is the total amount that you can get out after a forced expiration. It's called forced expiratory volume. Now, if each one of these lots [193] represent one liter, and I'm going to make it easy for you, how many liters did this person get out? What was his FEV?

So, it's the total amount he gets out after one large breath. So, that's what a FEV is, the total amount of air you can get out after one breath. So, this individual did a 1, 2, 3, 4, 5—let's just say 5 liters, and if you're trying to determine whether that's normal or not, you have to compare it with a

standard and it may be—normal might be 4.8. So, the number you're going to get is, say, 105%. So, 80 to 100% is normal.

The other thing is the FEV1 is the amount of air you get out in one second. So, if this slide from here to here is one liter, from here to here is one second. So, you look and see how much air an individual got out in one second, but you look on this particular—so, how much did he get out; 1, 2, 3 liters. So, that's the FEV1, forced expiratory volume subscript 1 which is forced expiratory volume one second, the amount that you get out in one second.

So, when we talk about a restrictive disease, we talk about people who get most of their air out all right, but doesn't get the total amount. That's a [194] restrictive impairment and, so, the total amount they get out, the amount they should, would be less.

If they have an obstructive impairment, then they have a problem getting it out because—So, this person gets out 30% in one second, 30% of the total. He's restricted. This person got the amount that he should have gotten out. Got it?

MR. RION: May Doctor Gaziano be excused?

THE COURT: Sure may.

(Witness excused.)

TRIAL TRANSCRIPT
April 16, 1998

Butler Testimony

* * * *

[194] MR. RION: I call Mr. Carl Butler.

THE COURT: If we run by you with a term like that again, just ask and we'll get the answers for you.

(Witness sworn.)

THEREUPON came,

CARL BUTLER,

one of the plaintiffs herein, after having been first duly sworn to tell the truth, testified as follows:

DIRECT EXAMINATION

BY MR. RION:

Q. How are you doing this afternoon, Mr. Butler?
A. Fine.
Q. If you would, to get started, I'd like for you just to tell the members of the jury your full name.
[195] A. Carl Butler.
Q. Are you married, Mr. Butler?
A. Yes, sir.
Q. What is your wife's name?
A. Mary Elaine.
Q. How long have you and Mary Elaine been married?
A. Forty-seven years.
Q. How long?
A. Forty-seven.
Q. I'm going to swing the microphone into you just a little bit and ask you to speak up just so everybody can hear you.
Where do the two of you live?

A. The address is HC 78, Pipestem, West Virginia.

Q. How long have the two of you lived down in Pipestem?

A. Nine years.

Q. Does the place where you and your wife down in Pipestem have any special significance to you?

A. Well, it was where I grew up mostly.

Q. The only family home?

A. It was since '49.

Q. How many acres do you have down there in [196] Pipestem?

A. A hundred and eighty.

Q. Do you have what you consider to be sort of a farm down there?

A. Yes, sir.

Q. What do you have on your farm; is it the basic chickens and cows and stuff like that?

A. Cattle and a few chickens.

Q. Anything else you do on the farm down there?

A. Plenty.

Q. I believe you and your wife probably raised a houseful of kids down there, too, didn't you?

A. We had seven and raised nine.

Q. Do you have any great grandkids?

A. I have nine.

Q. Do you have any grandkids? Did you tell me the grandkids first or the great grandkids?

A. Grandchildren.

Q. Okay. How many great grandchildren do you have?

A . I have five.

Q. How many is that total if you count them all up?

A. I didn't count them.

[197] Q. A lot of them?

A. Several.

Q. Do you need the big farm down there for a family reunion?

A. I sure do.

Q. Just for a little bit of background; would you tell the jury, please, sir, where you were born?

A. I was born in Mercer, I think in Bluefield, West Virginia.

Q. Did you go to school down there?

A. Yes, sir.

Q. How far did you go in school?

A. Twelfth grade.

Q. When did you graduate from school?

A. '49, 1949.

Q. Were you ever in the military?

A. No, sir.

Q. How tall are you?

A. I'm five nine, five eight and a half.

Q. How much do you currently weigh?

A. Two twenty.

Q. Have you ever smoked cigarettes, Mr. Butler?

A. Yes, sir.

Q. When did you start smoking?

[198] A. Oh, when I was about—about '49, '50.

Q. About 1949, 1950?

A. Yes, sir.

Q. Do you recall when you quit smoking?

A. About '65.

Q. I'd like to show you if I could, sir—it's a copy of a medical record from down at the Princeton Community Hospital. I'd like to show it to you and ask you to take a look at it.

A. Yes, sir.

Q. Do you recognize the date down at the bottom being a date from 1986?

A. Yes, sir.

Q. Who was the doctor down there that was seeing you in 1986?

A. Oh, I can't see—that was—

Q. Does it look like Dr. Wardren?
A. Wardren, yes, sir.
Q. What did he see you for in 1986?
A. A cataract on my eye.
Q. Do you see the upper part of the document here where I've highlighted some ing in yellow?
A. Yes, sir.
Q. Do you see where it says, smokes one pack of [199] cigarettes per day?
A. Yes, sir.
Q. Can you explain if you quit in '65 why there's a medical record in '86 that says you smoked a pack a day?
A. There must have been a misunderstanding there because he might have asked me if I ever smoked and how much, but I definitely didn't smoke at that period of time.
Q. You weren't smoking at all in 1986?
A. No, sir.
Q. No question?
A. No question in my mind.
Q. I want to talk to you if I could about your railroad employment. When did you first go to work for the railroad?
A. In '51, to the best of my knowledge.
Q. Which railroad was that for?
A. Virginia.
Q. Was it eventually bought out by the Norfolk & Western?
A. Yes, sir.
Q. What geographic shop did you work in when you went to work in 1951?
[200] A. The machine shop.
Q. Was that down in Princeton?
A. Princeton.
Q. In 1951 when you went to work for the railroad, how long a period of time did you work for them?
A. Approximately three months.

Q. What was your particular job title during that three-month period?
A. I was a machinist apprentice, and I was taking measurements for bolts and sleeves in the engines, making them and putting them in all the engines.
Q. During that three-month period, did you do anything other than just general work on the locomotives?
A. No, sir. That was other than making the—lathes, little pins.
Q. How much of your work during that period of time actually doing repair work to steam locomotives?
A. All that time.
Q. Was anybody else working on the steam locomotives at the same time you were?
A. There were a lot of people.
Q. What were they doing to the steam locomotives, [201] the other people?
A. They were repairing, covering the insulation, whatever needed to be done.
Q. The jury has seen this picture several times. When you talk about insulation work and repair work, is this picture kind of represent the kinds of things you saw going on in the shop during that period of time?
A. Yes, sir, I saw some of it.
Q. The picture is Plaintiff's Exhibit No. 17-1 just for reference.
Did repairs that the boilermakers were doing on the steam locomotives require the jackets to be removed off the steam locomotives?
A Yes, sir.
Q. Would you have been around in the shop while that was being done?
A. Yes, sir, I was in the shop back and forth in the area there.

Q. How many steam locomotives could they actually have inside the shop at any given time down in Princeton to be worked on?

A. I don't know how many they could get in there, but they generally had one. If they had one outside, I don't know.

[202] Q. Did you ever—were you ever actually when you saw the asbestos being removed from the steam locomotives?

A. I've saw it on the floor.

Q. Were you ever around when folks were sweeping up or cleaning up after the asbestos had been removed?

A. Yes, sir.

Q. When you were working on the locomotives, where were you generally working on the locomotives, and I guess by that; were you generally the person that was on top somewhere or were you down underneath the locomotive?

A. I was underneath.

Q. During the three-month period of time that you were working in the rail shops down in Princeton, was it a dusty work environment?

A. You could see dust at times. Sometimes it was real dusty and sometimes it wasn't as bad.

Q. Was it visible in the air, at times you could see it?

A. At times.

Q. Do you believe during that three-month period of time that you were exposed to asbestos in the air at the Princeton shop?

[203] A. It was there. I couldn't say.

Q. After that three-month period of time, did you ever work for the railroad again at some time later?

A. Yes, sir.

Q. When was that?

A. In '66 and '67.

Q. Does it more like maybe '56 and '57?

A. Yes, sir.

Q. Where did you work for the railroad during that period of time?

A. I worked at the car yard.

Q. What specific facility, was it back at Princeton?

A. Princeton.

Q. What did you do—what was your job title and what did you do in the car yard?

A. Well, I burnt some and welded some, drove rivets,—rivets along the sides. They had some jobs you could bid on. If you wanted to change jobs, you had to bid on it. If you got it, you got it.

Q. How much do you remember about the specific things that were going on in the car shop while you were there?

A. Well, we worked three shifts. I worked second [204] shift part of the time and third shift part of the time. We had old stoves in there they burned coal in, just an old potbelly stove we stood around and other than that, we were putting cars together, sides is mostly what I was doing on the night shift, riveting sides.

Q. Was there any coal or coal dust in the work environment in the shop when you were working?

A. Some out of those old stoves because we were building new cars in there. It wasn't as much as it was outside.

Q. How much coal or coal dust was there outside the shop?

A. Well, they was fooling out there in the yard about all the time when it was windy.

Q. Did they actually keep coal somewhere in the area, though?

A. No, it was just where the coal cars come through there all the time.

Q. That's something that you would have been exposed to?

A. I suppose so.

Q. Do you know whether or not you were exposed to any asbestos products in this '56, '57 time period?

A. No, sir, I don't know I was ever exposed, but [205] some of those pipes were insulated, but I couldn't say.

Q. What type of pipes are we talking about?
A. About heating pipes.
Q. Steam pipes?
A. Yes, sir.
Q. Other than your work at the railroad, were there other places after you left the railroad that you worked where you would have been exposed to asbestos?
A. Yes, sir, it's possible.
Q. Would you name some of those places for us just so the jury can be familiar with them?
A. I worked at the Princeton powerhouse, down at Mitchell powerhouse, MM Virginia powerhouse. I worked at Cardinal powerhouse, John Amos, but Cardinal and Mitchell powerhouse was new. There wasn't as much insulation there at it was in the other three.
Q. So, besides the railroad there were other places where you would have significant asbestos exposure?
A. Yes, sir.
Q. What year did you actually retire for good when you weren't working for anybody any longer except yourself, maybe, down on the farm?
A. In '94.
[206] Q. Let me go back just a second to the two periods of time when you were working for the N & W Railroad. That's the three-month period in '51 and then back in '66 and '67. During that period of time, did anyone at the railroad ever tell you that there was a health hazard from being exposed to the asbestos?
A. No, sir.
Q. Did anyone at the railroad talk to you or instruct you about how to make the use of asbestos safer?
A. No, sir.
Q. Did anyone at the railroad ever recommend that you ought to wear a respirator while you were working around the asbestos?
A. No, sir.

Q. Did they come in and take an x-ray to see if your lungs had any damage or not?
A. No.
Q. Did you ever see anybody take any dust measurements at the railroad while you were there?
A. No, sir.
Q. Do you recall when you were first diagnosed with asbestosis?
A. Yes, sir.
[207] Q. When was that, what year?
A. I think around '91, '90 or '91. I don't know the exact date.
Q. Did you have any idea prior to that period of time that you might have an asbestos disease or some type of lung disease?
A. No, sir.
Q. Since 1991 to today, do you feel like your breathing has gotten better or gotten worse?
A. It's gotten worse.
Q. What are some of the types of things that you do in your daily routine that you feel like you can't do as well today as you used to because of your breathing?
A. Well, there's quite a few things. Any amount of things, like putting up hay. I don't have the wind that I used to have or I was trying to carry a block of salt the other day about fifty yards, but I had to put it down about three times before I got there, minor things.
Q. Do you consider the kinds of things that you've done down on the farm to be fairly physical type activities?
A. Most of it.
Q. Have you—say, in the last five or six [208] years, have you done anything to sort of help accommodate you being able to do those easier?
A. Well, I've had to go buy equipment to do it.
Q. Tell the jury why and what you mean by that?

A. Well, you've got hay to put up and I can't do a lot as I used to. I can't pick up a bale of hay higher than my knees. If I work over ten to fifteen minutes and I've got to sit down. You can't get any help, anybody to help you. So, you've got to buy equipment to do your work. That's about the size of it.

Q. When you say you went out and bought equipment, what did you buy and what did you do to change, for instance, how you bale the hay?

A. Well, I had a buy a round baler instead of a square baler.

Q. Explain the difference, what you mean by a round baler and a square baler and what that is.

A. Well, a square baler is a baler that bales hay and drops it on the ground, about a fifty pound bale, and you have to pick it up and move it on a truck and haul it to the barn.

Q. Is that the little small one that you see sometimes when you go to the county fair or something like that just sitting there?

[209] A. Yes.

Q. Okay.

A. I bought a round baler and you just rake it over behind the tractor and it just picks it up and rolls it up and you come back with a tractor and pick it up and take it where you're going instead of picking it up, manhandling it.

Q. Did you ever do any hunting when you were growing up?

A. Yes, sir.

Q. How did you use to hunt?

A. Well, I used to hunt about all the time. I don't do any hunting anymore. I can't get around over the hills.

Q. Do you ever do any hunting off the front porch anymore?

A. Not this year.

MR. RION: Yes, ma'am. I'm sorry.

JUROR: How old is Mr. Butler?

MR. RION: I'm sorry. Tell the jury how old you are, Mr. Butler.

THE WITNESS: Sixty-six.

MR. RION: I apologize. I should have asked that question.

[210] BY MR. RION:

Q. Do you still try to keep a garden?

A. Yes, sir.

Q. Can you do your gardening as well as you used to?

A. No, sir.

Q. Tell me what is different?

A. Well, I just hoe about half a row and have to sit down and rest awhile or get—I'll rest a while and then start again.

Q. How long has it been since you started having to sort of take the breaks when you did that?

A. The last two or three years, it seems—it's getting worse, but it's not getting any better.

Q. Because of your exposure to asbestos, do you have any concerns that you might develop a cancer from your asbestos exposure?

A. Yes, sir, I do.

Q. Is it something that worries you?

A. Well, my mother had cancer with the breast and taking care of her and watched how she suffered. I just don't want to go through that myself. I had a son that died with colon cancer. I've been through it and I know it's painful. I don't want to scare them if I'd have to [211] go through it.

Q. What do you worry about the most as it relates to your concerns about cancer?

A. Well, if I go there's nobody to take care of the farm or anything. Mostly, it's just going through the suffering and pain.

MR. RION: That's all the questions I have for you, Mr. Butler. I'm sure we're going to have a few questions from—

CROSS-EXAMINATION

BY MR. BAKER:

Q. Mr. Butler, we've met before, haven't we?
A. Yes, we have.
Q. A couple occasions, didn't we?
A. A couple times.
Q. What, one afternoon and one morning, wasn't it? Is that about right?
A. It was two afternoons, wasn't it?
Q. Was it two afternoons, okay, yeah.
A. Yeah, it was two afternoons.
Q. I just have a few questions for you. You talked a little bit earlier when you gave your direct testimony about getting short of breath when you were carrying a salt block. Was it fifty yards, is that what [212] you told me, was that what you said?
A. It was about, I'd say, fifty yards.
Q. Is that a twenty-five pound salt block you're talking about?
A. I'm talking about a forty pound.
Q. You were also talking a little bit about getting out of breath when you went up hills and not being able to hunt and things like that, do you remember that?
A. Yes, sir.
Q. When we talked about that in your deposition, do you remember telling me some other things that kept you from being able to hunt including your rheumatism and your arthritis?
A. Yes, sir.
Q. Is that still true?
A. It's still true.
Q. So, were you in the room when Dr. Gaziano gave his testimony?
A. Yes, sir.

Q. Did you hear Dr. Gaziano talk about your work as a pipefitter and a sheetmetal worker and how he categorized that as thirty-three years of fairly significant exposure to asbestos-containing products?
[213] A. No, sir, I didn't hear him mention anything about sheetmetal.
Q. Okay. You were a pipefitter, right?
A. Right.
Q. Well, I'll tell you why I said that. Some people on the railroads, pipefitters and sheetmetal workers that's the same job, but obviously in the pipefitter industry where you worked that's not true, is it?
A. No, sir.
Q. You worked outside those powerhouses you told me about just a moment ago, you worked in a lot of other places like schools, industrial factories and places like that, didn't you?
A. Yes, sir.
Q. The type of work that you were doing was always pipefitter work, is that right?
A. Yes, sir.
Q. And my understanding of your work as a pipefitter, what you did was you would go in plants and either install new pipes for air control systems and in some cases steam pipes, boilers, hooking up the lines to boilers. Does that fairly summarize what you did as a pipefitter?
[214] A. Yes, sir.
Q. Are there any other types of different jobs that you did as a pipefitter? You did tell me you welded some, too, is that right?
A. Yes, sir.
Q. Now, in most of these places that you worked and I've got about two pages of them because that's what we spent most of our two days talking about, wasn't it, all the different places you worked as a pipefitter?
A. Yes, sir.

Q. In most of those places that you worked, you would go in and replace the old pipe after the insulators or someone like that was pulling the insulation off, is that right?

A. Yes, sir.

Q. I understand that sometimes you worked with pipes that wasn't insulated, is that right?

A. Yes, sir.

Q. I believe you told me that generally the insulators or—I guess it would be insulators, were in front of you taking off the insulation and you come from behind putting in the new pipe, is that right?

A. Yes, sir.

Q. There were some occasions and I don't want to [215] get down into the specific jobs that you did because we could be here for a week, but there were some occasions where you would actually remove the old pipe and the insulation that was on the pipe yourself, is that right?

A. Just on rare occasions. If there was a spot there they missed or something, I'd knock it off, yes, sir.

Q. Now, those insulators when they removed that insulation, they'd just let it drop to the ground?

A. They would let it fall and a man would pick it up.

Q. What does that insulation that we've been talking about generally look like? Is it chalky white?

A. Well, it depended on what kind of fluid was going through the pipes. Steam pipes was chalky like colored, something similar to what's on that board, and some of it was just like this—what do you call it. Like I say, I'm not an insulator, but—I'm not familiar with all of it. The different types of pipe depending on what was going through it, they had different types of insulation.

Q. I'm sorry. I didn't hear the last part.

A. Different types of pipe, depending on what was going through, they had different types of insulation.

[216] Q. During the time you worked the three-months or so—working out of the machine shop in Princeton, you never actually worked on the boilers themselves, did you?

A. On that picture I can show you, but on the boiler—

Q. Is it my understanding that you were working up underneath?

A. Yes. I can show you where I worked mostly. I mean, what my work was. Actually on these rods here and stuff that pulls and turns the wheels, all these rods. I replaced the bushings and the pins in there.

Q. There at Princeton where you were working in the machine shop, that wasn't what they called the vac shop, was it? That was just the car shop where you worked, correct?

A. No, sir, the machine shop was right beside the round house. They pulled the engines into the end of the machine shop to be repaired.

Q. Do you know the difference in the round house and the vac shop, don't you? Are those two words different to you?

A. Not really.

Q. At or around the machine shop where you [217] worked, they didn't take the whole jacket off the boiler, completely strip the boilers down and put completely new insulation on the boilers, did they?

A. Not the whole thing at that time.

Q. They were just doing running repairs there?

A. I'd say. Yes, sir.

Q. Now, in your deposition, I believe we finally agreed that you worked somewhere between 21 and 23 total months for the railroad, is that right?

A. Twenty-three.

Q. Mr. Butler, you were asked some questions a moment ago about if you were ever warned about the use of asbestos on the railroad or if you were ever required to take a chest x-rays or if you ever saw anyone taking any dust meas-

urements while you were on the railroad. Do you remember those questions?

A. Yes, sir.

Q. During your work as an insulator, do you remember or can you tell me the first time that you believe you ever saw any type of sign at any of the places that you worked warning you that you should avoid areas because of asbestos use?

A. I don't—repeat the question there. You said as I worked as an insulator.

[218] Q. I'm sorry, as a pipefitter. I should have phrased that better. I'm not meaning to confuse you.

A. Well, you said insulator.

Q. During your work as a pipefitter, when was the first time that you can remember ever seeing any type of sign warning you that you should avoid a particular area of a plant or building or something like that because asbestos was used there?

A. Well, I don't remember any particular time, but I can remember times where they were tearing insulation out was college that they barricaded the door. They didn't want you to go through there.

Q. Do you remember working at Wesvaco or Covington?

A. Yes, sir.

Q. Was that one of the last places you worked before you stopped working?

A. No, sir.

Q. When did you work at Wesvaco and Covington?

A. I think it was '64.

Q. You're not sure when you worked—

A. I believe about '91.

Q. '91?

A. That's close.

[219] Q. Do you remember when you were at Wesvaco and Covington seeing a sign warning you not to use a particular door because they were removing some asbestos in there?

A. They was tearing some asbestos off along the driveway and they had it barricaded off and you had to go around.

Q. Can you ever remember seeing any warning about asbestos in any of your work as a pipefitter before that time?

A. No warnings, no, sir.

Q. You belonged to a union when you were a pipefitter, is that right?

A. Yes, sir.

Q. Did the union or any of the employers that you had during the time that you worked as a pipefitter ever ask you or require you or suggest to you that you get chest x-rays on a regular basis?

A. No, sir.

Q. Did the union or any of the employers that you had during that time period ever ask you to have pulmonary function tests taken or breathing tests?

A. No, sir.

Q. Do you know or do you ever remember seeing [220] anybody take any dust measurements at any of the places that you worked after you left the railroad?

A. No, sir.

MR. BAKER: I thank you, Mr. Butler. I think that's all I have for now.

MR. RION: Just a couple of quick follow-ups.

REDIRECT EXAMINATION

BY MR. RION:

Q. You were asked just a few minutes ago about the forty-pound salt block. Did there used to be a time when you could carry that forty-pound salt block fifty yards?

A. One under each arm.

Q. You just can't do it any more, can you?

A. No, sir.

Q. How often do you do something in your daily activities that makes you notice your shortness of breath?

A. Every time I go out to the barn or I have to walk up the creek—I guess it's about 75 yards. It's uphill, but I didn't pay any attention to it. If I go up there now, sometimes I have to stop and when I do I'm plumb out of breath, things like that and I was out on the hill the other day, on the hillside, and I just made [221] it back to the house. Of course, it was awful steep around there, but it's got to where I can't walk a distance. I just have to stop and get my breath, things like that.

MR. RION: That's all the questions.

MR. BAKER: I don't have any follow-up questions, Your Honor.

THE COURT: Mr. Butler, you may step down.

(Witness stands aside.)

THE COURT: Do you all want to call your next witness?

MR. RION: It's going to be a coworker and it may be a good place to start—not a coworker, but a plaintiff. I don't know what time you're going to break, but he'll be substantially longer on my part. I move that you continue—

THE COURT: Do you want to call it quits for the day?

MR. RION: Now would be a good time.

MR. ADKINS: Right. Are we on schedule?

THE COURT: I've got two things tomorrow morning. It won't do much good for you to come in until about quarter after, so 9:15 we will start again.

(WHEREUPON, the jury was excused for

* * * *

TRIAL TRANSCRIPT
April 17, 1998

Ayers Testimony

* * * *

[3] MR. BOITER: Call Mr. Ayers, Your Honor.

(Witness sworn)

THEREUPON CAME,

FREEMAN RAY AYERS

who, having been first duly sworn according to law, testified as follows:

DIRECT EXAMINATION

BY MR. BOITER:

Q: How are you this morning, Mr. Ayers?
A: Fine.
Q: Are you ready to go?
A: Ready to go.
Q: Okay. Could you tell the jury, please, sir, your full name?
A: Freeman Ray Ayers.
Q: This first question I want to get out of the way this morning, Mr. Ayers, because I don't want to mess up the afternoon, tell the jury how old you are.
A: Seventy.
Q: Are you currently married?
A: Yes, sir.
Q: How long have you been married?
[4] A: Oh, since 19—July 29, 1950, about forty, almost fifty years.
Q: Do you and your wife have any children?
A: I have two adopted children.
Q: How old are your two adopted children?
A: Oh,—

Q: They're not here in the courtroom today are they?
A: No, sir.
Q: Okay.
A: If they were here they'd expect me to remember that.
Q: Let me ask you this, I've been asking everybody and we sort of seem to have a wealth of them, do you have any grandkids?
A: Yes, sir. I have four.
Q: Do you have any greatgrandkids?
A: I've got four greatgrandkids, and one that I raise that's no kin to me.
Q: So, family reunions are pretty big for you, too?
A: Right, right.
Q: Where do you and your wife currently [5] live?
A: We live in Princeton.
Q: How long have you lived down in Princeton?
A: Since 1940.
Q: Would you tell the jury a little bit about your education, how far you went in school?
A: I went to the eighth grade.
Q: And what year did you leave school?
A: I can't remember exactly.
Q: Well, let me ask you this question: After you left school in the eighth grade what did you do?
A: I worked on the farm to help my parents.
Q: Did there come a time when you went into the military?
A: I went into the military in '43, I believe it was, '42 or '43.
Q: What did you do in the military?
A: I was in charge of base operation on the airstrip—airfield.
Q: What kind of duties did those entail?
[6] A: That was taking care of the fire department, the crash crew, radio operator, instruction on giving the planes to land when they'd land and take off.

Q: How long were you in the military doing that kind of stuff?
A: I was in the military two years, eleven months, and thirteen days.
Q: You got that one right.
A: I know.
Q: Let me back up just for a second and cover one more piece of background I forgot, have you ever smoked cigarettes?
A: Yes, sir.
Q: When did you start smoking cigarettes?
A: I guess when I was about eighteen—seventeen or eighteen.
Q: How long did you smoke?
A: Well, off and on.
Q: Do you recall—let me ask you this question: When did you stop smoking?
A: Well, I'd stopped three or four times.
[7] Q: When did you stop the last time?
A: About four months ago—five—about four months ago.
Q: Okay. During the period of time that you'd been smoking on and off, what's the most you ever smoked?
A: Maybe two packs a day.
Q: Did you also smoke less than that during that period of time?
A: Yes, sir.
Q: What's the least per day you think you smoked?
A: Maybe a pack.
Q: What did you do when you left the military?
A: I went to school.
Q: How long did you go to school?
A: Well, let's see,—no, when I got out of the military I went to work on the railroad.
Q: Okay.
A: I got a job at the Princeton shop on the Virginian.

Q: And that was about 1940-what?

[8] A: Well, '46, I believe it was, '46, '47 I worked there.

Q: What was your job at the railroad when you started with them?

A: I was a mechanics helper.

Q: Where were you working, where did you start working for the railroad?

A: The Virginian shop.

Q: Does it have a—I mean, is it Princeton, Bluefield, where?

A: Princeton.

Q: What department did you work in as a mechanics helper?

A: Building railroad cars.

Q: Would you sort of describe for the jury the process—what you did building cars?

A: Well, I bucked the rivets in.

Q: Okay.

A: We was building the cars completely.

Q: How about tell me and the jury what bucking rivets is?

A: Well, that's catching a red hot rivet in a cup and sticking it in a hole and putting a [9] dollybar on it, and the mechanic on the other side would brad the rivets up.

Q: And what was the purpose of doing that?

A: Hooking the car together, welding the sides and the metal together with rivets.

Q: So that's what held it together was the rivets?

A: Yes, sir.

Q: Did you—during the period of time, '47 when you started, did you do anything else besides your working the car department?

A: Yes, sir. I would help out in an emergency when somebody was layed off in the engine department where they'd reworked on the boiler on the locomotive.

Q: What type of work was being done in the boiler shops?

A: They was completely overhauling.

Q: Okay. We've shown the jury a couple of photographs. Is that—does that look kind of like what was going on in there?

A: Yes, sir.

Q: Backing up for a second, when you were [10] working in the car department did you ever, yourself, personnally work with any asbestos products?

A: Not unless I'd go work on the engines, on them.

Q: The actual process of making the cars you didn't use asbestos?

A: No, sir.

Q: In the shop were there any overhead steamlines?

A: Yes, sir.

Q: Were there any—did they have an overhead crane in those shops?

A: There was two of them.

Q: How about describing for the jury what an overhead crane is and what would happen when it was used?

A: Well, they would pick up as we would—one area would build the sides of the cars and this crane would pick it up and take it down and bring it—cross it over for us to assemble the car onto the main frame of it, and they would rivet it together. Then they would put pins through it to hold it together and then we would ream it.

[11] They would be—as you come down, it's like an assembly line, and when they'd come down the assembly line one guy would ream it and then we'd put the rivets in and then rivets it all together.

Q: Physically, how did an overhead crane operate in a building? How was it setup to work?

A: It was on tracks, and it run all the way the width of the shed, there, two of them. One on each side.

Q: Okay. As—when the overhead crane was in use what would happen to the building and to the steampipes?

A: It would vibrate.

Q: When it was used and when it was vibrating back and forth across, did it create any dust in the shops?

A: Of course.

Q: Why?

A: Because of the vibration in it.

Q: How big is an overhead steam crane?

A: It wasn't—the crane wasn't steam, it was electric. It run like a streetcar. It had wires along the side that he got his juice and his contact [12] from, but it would run backwards and forwards across the track, itself.

On the crane when they—and we wasn't—in other words, when it was a moving we made sure we was in the safety, that we couldn't be nowhere near where that would fall or break on us. Do you know what I mean? It was for our own good. We done it ourselves, you know.

Q: I'm trying to speak up. I think you misunderstood my question. How big, physically, was a steam crane?

A: Steam crane?

Q: Not a steam crane, I'm sorry, the overhead crane, how big was that?

A: It was big enough to pick up a whole railroad car and move it after it was assembled.

Q: During the periods of time that you were in the boiler shop, what other type of craft people were in there working?

A: They was boilermakers and mechanics.

Q: What was the boilermakers actually doing in the shops?

A: They was reworking, putting new flues into the engine, completely overhauling them. [13] Rebuilding them from the ground up.

Q: Okay. Did you ever see the boilermakers using the block material?

A: Yes, sir.

Q: What would they be doing with it?

A: They'd be placing it on or taking it off the engine.

Q: Did they ever insulate the engines with anything other than the block?

A: Where they couldn't get a block around a section, like this chair, if you couldn't put a block around it, they would wet the asbestos, mix it up from a powder form and pass it on and around the ceiling to make sure everything was—had asbestos on it and sealed it before they put the cover over it; the jacket.

Q: Were you around these folks when they were applying or removing the blocks?

A: Yes, sir.

Q: Did that process create visible dust?

A: Yes, sir.

Q: Were you around the folks when they were mixing up the mud?

A: Yes, sir. I have mixed it.

[14] Q: Did that process create visible dust?

A: Yeah, if you—yes, sir.

Q: Would you—was the mixing of the mud something that you did a little bit or a lot when you were over there in those shops?

A: The only time I would be involved in it would be when one of the regular crew would lay-off and they'd use us for an emergency, you know, like you say we need a man up there, a laborer or a helper, and we'd—they'd move us from one job to another.

Q: Did you ever help any of the folks actually remove the asbestos off the steam locomotives?

A: No, sir.

Q: What were you actually doing to help in the removal process?

A: Well, we would—in other words, them big—they take them off and let them fall onto the floor and we get them and put them in a buggy-like thing and roll them—roll them out

from the outside where they would—then somebody else, you know, would dispose of them more.

Q: Just sort of estimate for me, how far [15] was from where they were throwing off of the steam locomotives to the floor where they were thrown, do you know about what the distance was?

A: Well, it's the heighth of an engine, eight, ten feet. They was big old locomotive's, the big one.

Q: When they'd throw it off, it hit the floor, would it be dusty?

A: Yes, sir, and some of it would just deteriorate, do you know what I mean, the blocks, when it hit the floor, it would just go into like a powder.

Q: How long did you work the car department/boiler shop job?

A: The car department I worked about two-and-a-half years. In the car department and the boiler, you know what I mean.

Q: Uh-huh.

A: As a laborer.

Q: What did you do next after that?

A: Well, I got layed off there and I went to school. I went to air condition/refigeration school. I went to shop foreman school in Kansas City to learn to be a body man and a shop foreman. Then I went to—[16] well, I went to Pittsburgh to air condition/refrigeration school, Kansas City for specializing in automatic transmissions and stuff. Because I didn't have the education I wanted and the government was a paying for it so I took use of it, and then, in the '50's I went to work at Elmore. I got a job braking on the yard.

Q: Okay. Who were you working for at Elmore?

A: I was working for the Virginian in Elmore.

Q: Did you go in doing refrigeration work to take care of your—from your education or was it something else?

A: Well, I just—there was no work in the refrigeration business so I got a job on the railroad.

Q: What did you start doing at Elmore?

A: I was a yard brakeman or a humprider, what you call a humprider. It's the same thing. The brakeman and humprider was—they could use you either way, you know.

Q: Explain to the jury, if you would, what [17] a brakeman or a humprider is, as you call it.

A: Well, a humprider, they had a hill that they would shove the cars up over it. They was separating the cars, one going east, west, you know what I mean, different tracks, and they would cut these cars off and you would ride them down this hill into these certain tracks to make up the trains that was going, well, we call them up the hill and down the river.

Down there, that was our short way of telling, you know, east and west, and then a brakeman, you would take them trains and move them around, switch them around and set them up.

Q: As a brakeman did you do any work out on the lines of the railroad?

A: No, sir.

Q: Did you do any work in the shops?

A: Not in the—not after I went to breaking.

Q: Okay. During the period of time that you were doing brakeman work, do you believe you were exposed to any asbestos containing product at the railroad?

A: Well, all of the steam engines was [18] covered in them, you know, in that.

Q: Explain to the jury, if you would, the way you would've been exposed to asbestos as a brakeman.

A: Well, the vibration of the engine and the trains, we was setting in a little compartment about,—oh, I bet it's a bit further than this, the cab of the engine that you would sit in, and the boiler was right here in front of you, and the vibration, that dust would come off and come back into the cab.

Q: Would the trains be under power, is what you're talking about?

A: Yes, sir. Yes, sir.

Q: During the period of time that you were brakeman, did you ever take any of the engines into any of the shops?

A: Yes, sir.

Q: Okay. When were you doing that?

A: Well, when we got a dead engine, I'd worked from Elmore, and if they needed a brakeman in Princeton, we just switched around, do you know what I mean? Wherever they needed us we went. And when I'd work the Princeton shop, when we'd take a dead engine, we may put it into the repair shop, into the shop where [19] they rebuild them, at the turntable.

We take and sit them up on the turntable and they'd turn this table and they'd take the engines off from whichever room, you know—they was dead. They wouldn't run. We'd have to place them into the repair shop where they was going.

Q: Would you actually physically go into the shops then?

A: Yes, sir. We had to go into the side—into the shop where they rebuilt them.

Q: Was the shop at Princeton the same shop you'd gone to before that you were telling us about?

A: Yeah, it was an old Virginian shop.

Q: Were they still doing any of the same kind of things that they were doing when you were there before?

A: Yes, sir.

Q: What were they still doing at that point?

A: They were still building and rebuilding the engines, building the locomotives from the ground up—rebuilding them from the ground up.

Q: Were they still applying asbestos?

[20] A: Yes, sir.

Q: Still removing asbestos?

A: Yes, sir.

Q: Were they still mixing up the mud?

A: Now, I didn't, you know what I mean, as a brakeman I didn't get in—after I started braking, all I'd do is switch them and put them in, wherever they wanted them, you know what I mean.

Q: I understand, and I'm not talking about you, but were there other people who were doing those kinds of things in the shop while you were there?

A: Yes, sir.

Q: Would you see, when you'd go into the shops at that point, would you see dust from what these folks were doing?

A: Yes, sir.

Q: How long did you work as a brakeman?

A: I had ten years—about eleven years service as a brakeman.

Q: So about 1961, '62?

A: Yes, sir.

Q: During that period of time, did the railroad also begin phasing in the diesel engines?

[21] A: Yes, sir.

Q: Would some of your work as a brakeman have been on the diesel engines, also?

A: Yes, sir.

Q: During the period you worked from roughly 1947 to 1962, did anyone at the railroad ever tell you that asbestos was hazardous?

A: No.

Q: Did anyone at the railroad ever talk to you about ways to use asbestos more safely?

A: No, sir.

Q: During the entire period you worked at the railroad, did they ever make respirators available to you?

A: No, sir.

Q: Did the railroad ever come to you and say, "We want to take a chest x-ray to find out if your lungs are injured."?

A: No, sir.

Q: Okay. Do you recall ever seeing anybody taking any dust counts or dust measurements while you were working at the railroad?

A: No, sir.

[22] Q: Did you ever work for the railroad again after 1962, '61, '62?

A: No, sir.

Q: What did you do after you left the railroad in '62?

A: I had—when I was cut off and on on the railroad I went and had my own body and paint shop.

Q: Did you actually work for a Ford dealership for a short period of time?

A: Are you—

Q: Did you work for a Ford dealership at one point in time?

A: Yes, sir. I worked for Andy—was shop foreman and service manager for Andy Clark Ford.

Q: Okay. Do you remember about when that was?

A: I can't remember the exact date.

Q: How, just generally, how long was it after you left the railroad do you think that you did that?

A: Well, I put—built my own business in '67, I started my own business. So, it was '64 and 5, I guess, that I worked at—

[23] Q: When you were at—when you worked at the Ford dealership did you use any asbestos products?

A: No, sir, not then because we had all spotwelders and stuff.

Q: Do you ever recall, during your bodyshop days, using some powedered asbestos to put on the panels?

A: Yes, sir. Yes, sir. Now, we used that.

Q: When would that have been?

A: Well, when I—see, I was shop foreman. I didn't have—I wrote the estimates and set the jobs up for the men to do—for the body men to do, and I didn't go back in the shop

and actually do any welding and work. Now, I done it in my shop.

I mixed the—where we'd weld the panel together I'd mix the—had the asbestos that I put on the panel to keep it from warping when we welded it.

Q: When did you start the spotwelding process where you didn't use that?

A: Oh, in the '70's, later '70's.

Q: Okay. Are you currently taking any medications?

[24] A: Yes, sir.

Q: What are you taking medications for right now?

A: Well, for breathing, blood pressure, gout. I take seven pills a day.

Q: For the stuff you just told us about?

A: Uh-huh.

Q: Have the doctors ever told you that you have a lung disease from your exposure to asbestos at the railroads?

A: Yes, sir.

Q: Do you recall when you were first diagnosed?

A: I believe it was '91.

Q: Did you know, prior to 1991, that you had an asbestos lung injury?

A: Well, I figured they was something wrong because I was getting short of breath.

Q: Okay. Did you know it was asbestos before 1991?

A: No.

Q: When did you first notice yourself having problems with shortness of breath?

[25] A: It was after—well, I noticed it before '91, and after—it's getting worse now.

Q: What did you think it was to start with?

A: I did not know. I didn't know what it was.

Q: Do you recall how you first noticed that you were starting to get short of breath?

A: Well, I couldn't mow the grass, I couldn't walk, go up a hill.

Q: Has it continued to get worse?

A: Yes, sir.

Q: How have you sort of noticed it getting worse?

A: Well, there's a lot of things that I can't do that I used to do.

Q: Would you sort of talk to the jury about what those are?

A: Well, I can't walk no length of distance.

Q: How far do you think you can walk without getting short of breath today?

A: Maybe a block, block-and-a-half.

[26] Q: Did you have a shortness of breath episode yesterday walking to the courthouse with Mr. Pauley?

A: Yes, sir.

Q: Tell the jury about what happened?

A: Well, we was coming from the motel—or the hotel up to get in his car for him to bring me over here. He wanted—they first told me I could walk from my hotel over to here, which I knowed I couldn't do it, and me, and him was a walking up to the parking lot for his car and it started to rain and we had to pick it up and take it a little faster.

I didn't think I was going to make it. I had to stop a second and rest because I couldn't—

Q: Did you ever used to do any fishing?

A: I used to have a big twenty-eight foot Bayliner fishing boat.

Q: Where did you used to go fishing?

A: Up in New York, down in Santeak, Tupper in North Carolina, up in Lake Erie and in Cleveland.

Q: Is that something you used to like to do a lot?

A: I used to love it, but I got—I just [27] couldn't do it. I didn't have the wind and the strength to put in a—pull in a thirty pound salmon or twenty pound fish—catfish. So I just—I sold my boat and all my—biggest part of all my heavy equipment—fishing equipment.

Q: Do you have any concerns, Mr. Ayers, that you might develop a cancer from your exposure to asbestos?

A: Well, they say I might.

Q: Does it worry you or concern you any?

A: Well, I have an insurance policy that I've had for years for cancer, if I get it.

Q: Have you tried to do anything to sort of be prepared for the worst?

A: Yes, sir.

Q: What have you done?

A: Well, I paid off the Ranger.

Q: Is your wife here with you today?

A: No, sir.

Q: Why is she not here with you today?

A: Because I don't want her to know all this stuff.

Q: You don't ever talk to her about it?

[28] A: Oh, we talk but not that.

MR. BOITER: That's all the questions I have for you, Mr. Ayers. You've answered the questions. Thank you.

(WHEREUPON, direct examination was concluded as the testimony continued.)

TRIAL TRANSCRIPT
April 17, 1998

Shirley Testimony

* * * *

[3] MR. PAULEY: We call John Shirley.

(Witness sworn)

THEREUPON CAME,

MR. JOHN T. SHIRLEY

who, having been first duly sworn according to law, testified as follows:

DIRECT EXAMINATION

BY MR. PAULEY:

Q: Mr. Shirley, could you state your name for the jury, please?
A: John T. Shirley, Jr.
Q: And, how old are you, Mr. Shirley?
A: Sixty-nine.
Q: Where do you live?
A: Monroe County, West Virginia.
Q: That's down in the southern part of the state?
A: Yes, sir.
Q: How long have you lived there?
A: Approximately twenty-five years.
Q: Twenty-five years. Are you married?
A: Yes, sir.
Q: Is your wife here today?
[4] A: Yes, she is.
Q: What is her name?
A: Charlotte Louise.
Q: Does she go by Charlotte or Louise?
A: Charlotte.
Q: Charlotte?

A: Yes, sir.
Q: Do you and Charlotte have any children?
A: Yes, sir.
Q: How many children do you have?
A: Four boys.
Q: Four boys, and do you have any grandchildren?
A: Yes, sir.
Q: How many grandchildren do you have?
A: Seven.
Q: At your youthful age, do you have any great grandchildren?
A: Not yet.
Q: Not yet. What grade did you complete in high school?
A: Eighth grade—ninth grade.
Q: Ninth grade?
[5] A: Yes, I did.
Q: And have you had—did you go any further?
A: After I quit that year—I had missed some during my days when I was going to school on account of my legs and my feet, and I lost out quite a bit. So, I dropped out and then I was drafted in '50—1950 I was drafted into the service, and when they got me in there and found out my legs was messed up, well, they didn't keep me for just about ninety days and then sent me home.
Q: So the extent of your military service was ninety days?
A: About ninety days, and I got an honorable discharge. I took a GED test.
Q: What happened to your legs?
A: Well, when I was six years old we were seining for minnows and I was the guy that scooted my feet in the water and I stepped on a bottle and cut my ankle and shivered it. Back then they didn't have the things they have in this day and time, so, they done the best they could, but that wasn't good enough. I had too much fallin' down on me, my ankle fell out of the [6] socket. My foot was in real bad shape.

Q: Does your foot still bother you today?
A: Yes, it does.
Q: Mr. Shirley, you worked for the N&W Railroad?
A: Virginian, originally, first, and then the N&W.
Q: That became part of the N&W Railroad?
A: Yes. 1959 the Virginian merged with N&W.
Q: And when did you start working for the railroad?
A: September 15, 1947, I performed my first duty.
Q: When did you retire?
A: They retired me on disability in '76, I believe it is, to the best of my ability.
Q: You worked from '47 to '76 for the railroad?
A: Yes, sir.
Q: Did you work for any other employer during that time?
A: No, sir.
[7] Q: You were retired on a disability?
A: Yes, sir.
Q: Explain that to the jury.
A: I transferred into Bluefield, West Virginia, and I was called a caller, and the caller handled the mail for the train. I got myself all together and I went to grab a bag and throw it up on my shoulder to carry it down and it was overweight, and I messed my back up when it bent me over. But I went on performing and when I got off I had to go have it checked and they put me in the hospital and put me in traction.
Q: And so you were then retired on disability?
A: They retired me on that.
Q: When you were hired in at the railroad in '47 what was your initial job title?
A: I was hired to be a clerk and a yard master, is what I was hired—I was to be trained for, but when I went out to go to work for. A few days went by, after I was there watching and observing what I was supposed to be trained for and a cab supply job came open and they didn't have nobody—nobody to fulfill it [8] and they needed a man, and I ask them, I said,

"Let me go over there and start there", and the new yardmaster says, "Is that what you want to do?", and I said, "Well, I can start. I can always work up". And that's the way you did on the railroad, and he said, "All right". So I started cab supplying.
Q: Now, what other job titles did you hold in your twenty-nine years of service?
A: Car supplyman, labor, yard clerk. I worked some chief clerk on the side, yard checker, crew dispatcher, extra gang foreman, warehouse foreman.
Q: And did you do these jobs, like, go from one to the other, or did you have—go back and forth to these jobs, or why did you switch so much?
A: It was like a position—when a position would come open they would put it up for bid, and some jobs paid more than the other jobs and you, you know, you kept looking for the best work, and then when you go to that job, should anything occur or anything that—you see what would come open, maybe the man was off sick or something would happen, if you go to that job and take that then he was—he'd get better and come back he could just kick you off. Then you'd have [9] to look for another job and go back to another job. So, you was variously moving all the time in all these departments.
Q: You said you were a yard clerk and a clerk and all that?
A: Yes, sir.
Q: I think of a clerk as someone who sits in an office behind a desk. Is that what a clerk on the railroad does?
A: Well, that's probably like a checker. It's still a clerk. Foreman at the warehouse, he's still a clerk. See, we're all clerks. We belong to BHRC, the Brotherhood of Railway Clerks, and we were all in the clerical department. We're in what they call, I believe it's the transportation department. I'm not for sure.

Q: So, most of these jobs you've held were under the title of a clerk—some type of clerk?

A: Yeah. Yes, sir.

Q: Did that type of work involve being out in the railroad yard?

A: Oh, yes, sir. Yes, sir.

Q: Which of these job titles that you've [10] mentioned, and you mentioned quite a few, but which of these would involve exposure to dust—dusty conditions?

A: I'd say my greatest—most greatest exposure to the dust would be in the years I worked as a laborer at the stationhouse. It's a transfer station where cars come in from everywhere and we have to go down and open the cars up and go in and shift merchandise from different cars going in different directions.

So, if we have a car going—well, just in any direction, we'd have to go in there and set stuff up. And if there's more stuff in there going in the direction we're going we'd leave it in and just take the other stuff out and put it in the other cars, and in doing this we handled all kinds of asbestos materials.

We handled sheets of asbestos. We handled rolls of asbestos. We handled—and this was all open, just like you buy insulation today, in a roll.

Q: Now, as a yard—you mentioned a yard clerk. Were exposed to any levels of dust as a yard clerk?

A: Yes, I was. I'd be checking on leads, [11] and we'd get dust from the engine, dust from the coal. We had dust from the sand where the engine would be shifting cars. And my job, when I checked on the lead, I would be, maybe, six feet, five feet from where the train would go by me shifting the cars. And as it would come up here to shift the cars and stop to leave it to roll down the tracks, I'd have to be standing here getting the numbers of the cars as they went by; and the engine was up here and cut them off and stopped right there in front of me. And they would sit—drop sand from the sandboxes down the rails, which would give them traction for

the engine to move, and we'd get dust from that. We'd get dust from the cars, and that's mostly where we got it.

Q: So, you've mentioned three basic types of dust here to the jury. You've mentioned asbestos, sand, and you've also mentioned coal dust. Is that the primary types of dust you were exposed to?

A: Yes, sir. Yes.

Q: Let's—let me start out, I want to discuss these. Let me start out with the asbestos, you mentioned you were a car supply man, you handled asbestos?

[12] A: Yes.

Q: As I understand your testimony, cars would come in and you would transfer the—

A: Yes, sir.

Q: —materials, would that be like a box car?

A: Yes, sir. Well, the boxcar was put in a little warehouse with a track running down each side and a center platform, and they put twelve cars—let's see, twelve, either twelve, I'm not for sure, twelve or ten cars in here—come up in the yards; and what we'd have to do, our job was to go in there and open all them cars up, get the numbers down. And open all the cars up and then go in them and take the lading invoices of what was loaded in the cars, and then we'd determine what had the most of what in it. So we'd know which car we was going to have to get what out of, and we'd crack the car open where they'd shift it and banged it up in the yard. It would have damaged stuff all in it inside.

We'd get bags of asbestos. We'd get fifty pound bags, one hundred pound bags. We'd get cans that we shipped in a dust form. And what we'd have to do is push a two-wheel cart in there, and there were four of [13] us working. We had two loaders and two wheelers.

The boys that was wheeling, the other two was loading. I was in the loading capacity, and we'd reach down and pick it up.

Q: You're talking picking up a bag?
A: A bag of asbestos.
Q: Is this a bag of powder asbestos?
A: Yeah, well, like it'd need to be mixed.
Q: Okay. So you said cement. Is that like a cement bag?
A: Yeah, it's like a cement bag. You, you know, if you'd pick up a bag, as far as that goes, any kind of a bag that's got dust or anything in it, you'd pick it up and lay it over here or push it over, you're going to get some out of the sides of it, see.
Q: Okay.
A: But this was a whole lot thicker than that. I mean, you can get more from this because these have been shifted anyhow, and you—sometimes we'd find them that were busted open and we'd just have to clean it up, and show it as damaged.
Q: So these bags, when you move them [14] around, they were kind of dusty?
A: Yes, sir.
Q: And how many bags are we talking about you'd have to transfer, on the average?
A: Well, it could be, on the average, anywhere from fifty to one hundred, depending on what location it was going to and who had it ordered and where we was shipping it to.
Q: Could it be more than one hundred?
A: It could be more than one hundred. We shipped to all the lumber companies, all the mining companies, and just about anywhere that used material. We'd have to set up a car and ship it to them.
Q: Could you see that dust in the air when you were throwing those bags around?
A: Yes, sir.
Q: And you said it also came in sheets, I believe?
A: Four-by-eight sheets, if I'm not mistaken. I'm pretty sure it was four-by-eight sheets.
Q: Were those sheets very dusty?

A: The sheets weren't that bad, not that bad dusty. No, sir.
[15] Q: Now, were they wrapped up in paper?
A: No, sir.
Q: Just open sheets?
A: Just like you'd go by a piece of sheet rock. It was about the same size as a piece of sheet rock. It would come in by the sheet, like about a four-by-eight sheet.
Q: But it wasn't as dusty as the powdered bags?
A: There was dust—a little dust on them but not like you would—you wouldn't get the big dust spray that you would off the other stuff.
Q: Now, if I'm correct, you said earlier that sometimes the load would shift and the bags or the cans would be—have bust—would be busted?
A: Yes, sir. They sure did.
Q: Could you explain that to the jury?
A: Well, in shifting cars around on the engine—yard engine, you know, you go up here and you shove that and then you cut it off and you bounce that and you're going to shift it. Well, with the cars packed the way they are, inside the car, it can shift the materials.

[16] Sometimes we'd open the door and the stuff would be just spilled all over the car. We'd have to go in there and clean it all up and set it up and then try to get our lading invoices and check to see what was going where. And we'd know how to start loading it, and anything that was busted or just broke open, or busted open there we had to clean up.

We'd just have to clean it up. We didn't any kind of gloves. We weren't given any gloves. We weren't given any kind of a mask.

Q: So this powder was laying in the car?
A: Yes, sir. In the floor of the car, and busted open.
Q: In a powder form?
A: Yeah.

Q: And you had to sweep it up?
A: We had to sweep it up.
Q: Did that cause some dust?
A: Oh, yes, sir.
Q: Dust you could see in the air?
A: Yes, sir.
Q: How long were you a car supply man?
A: Probably, I'm not for sure, but [17] probably on and off, probably, six, eight, maybe ten years. That's on and off, different times in the position, and out of the position and back in.
Q: Now, when you were doing this transferring these bags and these sheets, would you get white dust on you—on your clothing?
A: Yeah, you would. Yes, sir.
Q: Did you get it on your face?
A: Yes, sir.
Q: Did you ever get it in your throat?
A: Oh, yes, sir.
Q: Did you cough it up?
A: Yeah, you'd have to cough it up.
Q: How—you keep saying this was asbestos. How do you know it was asbestos?
A: Just the markings on the boxes. See, they'd come in different containers and different packages and different weights. There's many different types of asbestos.
Q: The markings on the containers, what kind of markings are you talking about, did it say asbestos?
A: It would say asbestos, yes.
[18] Q: Did anyone ever tell you to wet this asbestos down when you were sweeping it up?
A: No.
Q: Were there any other places on the railroad where you came in contact with asbestos?
A: Most mine that I can recall would be at the stationhouse, at the transfer yard.

Q: What's the stationhouse?
A: That's what we just talked about. This transfer station, where I was just telling you about we worked out. Most mine, of the powdered type and stuff like that it would come from there.
Q: Were there any other buildings you worked at?
A: Yeah, I worked in buildings that were completely enclosed with asbestos. Overhead and around the pipes were covered with the insulation to cover with asbestos.
Q: What kind of buildings are you talking about?
A: Well, little small offices. Say, I worked in one of them that was probably eight-by-ten, and it was just a small office. I was the crew [19] inspector at that time in that office, and the walls were asbestos; the ceiling was asbestos.

The washrooms in there, they had it all packed around with asbestos to keep the heat, and keep it from freezing during the wintertime.

Q: Now, did this asbestos in the walls, was it dusty on these walls; did it have stuff flake off?
A: Not that bad in the offices, but in the shower room and places where they had it wrapped, sometimes it got wet and fall.
Q: Are you talking about wrapping around pipes?
A: Yeah.
Q: Is that steam pipes?
A: Yeah.
Q: You have also said this was asbestos. How do you know this was asbestos?
A: Well, from the looks of what the other was—it had it wrote on it.
Q: Now this asbestos on the walls in this building that was enclosed, did anyone ever tell you it was asbestos?
[20] A: No. Huh -uh.

Q: I want to switch now to the sand that you say you were exposed to. You mentioned the trains would come by and blow sand. Could you explain that better to the jury?

A: Yes. What it was, each engine behind the wheels had a box, and before they'd go on duty this engine would take and load the box of sand; and what the sand was put in there for was to give the engine traction when it started to pull out, or when it started to shove.

Q: Let me interrupt you for a second, what was your job duty during this?

A: I was checker.

Q: What did that involve?

A: Getting numbers off the side of the cars. I'd stand within, probably, five to six feet, maybe four—between four and six feet from the tracks where the cars would go by me and as they was pulling into the tracks I'd have to get the list of numbers; just hold a pad up and list of numbers of each car that went by me.

When they'd shove a cut up and cut them off, I [21] got the numbers, and when you cut them off then you would stop—cut the cars off and he'd throw this sand down and stop, and then when he started to pull out again he'd put sand back—to get the traction to get back out of there and go get another cut of cars.

Q: Now before I go onto that sand, your job was to write down the numbers of the cars as they went by?

A: Yes, sir.

Q: And you were standing four to six feet away?

A: Yes, sir.

Q: Could you have moved away from the train? Why were you standing so close?

A: So I could get the numbers. I don't want to get too far away from that train or I won't get them numbers, and they go by you fast. You've got to be quick.

Q: Okay. So you say there was a box of sand on the locomotive?

A: On each one of them they have what they call a sandbox. They call it a sandbox.

Q: Where is this located?

[22] A: Next to the wheels. It's above the wheels but there's a pipe that comes down and goes right into the shoot where it'll get right in on the drivers.

Q: Where does this pipe come out?

A: Right down where the wheels are and hit on the rails. It goes right down just like you—like the wheel was here (indicating), and the pipe come right down, on the edge, it come right down and then it would hit right close to that rail where the sand would come out of that pipe when they'd release it; and hit right on that rail, so when the engine went backwards or forwards it would hit it to give it traction.

Q: So the sand was thrown down on the rails so the train could have traction when it was stopping and starting?

A: Yeah.

Q: So you have a sandbox on the back of the train so when the, I guess the engineer, conductor, whoever it is—

A: Well, the engineer mostly is the man who handles all that.

Q: And as he would—

A: He would work that. It was just some [23]—now, I don't know the exact control or how it was set up, but I do know that they had sand, they had sandboxes and they had to be filled and they were sitting behind each driver. I'm talking about the wheels, with lines going down to the rail where it'd come right, maybe this far from the rail. I'm saying, just off the rail behind the wheel so that when the sand—he released the lever up there, why it would shoot the sand out right down on that rail where the wheel could hit it.

Q: Now, did this sand—so as I understand, the sand comes out and gets thrown in front of the wheels to give the train traction?

A: Right.

Q: Now, this is only when it's stopping and starting?

A: Stopping and starting.

Q: Earlier you said that you were standing there and they were going by fast. Now, when would the sand come out as they were going by?

A: When they're going by, this sand—the only time you get the sand is when the train stops, like he's cutting the cars off, or when he's pulling out. [24] See, he may pull out there with a cut of, say, fifteen cars. And out of these fifteen cars he's going to shift them into several different tracks laid out in front of him, and what he does, when he pulls out there and starts cutting them off, he may cut two off here, then he'll pull back up and he'll get him another—

What he has to do is pull them out here and get back here and then give him a shove and then stop right quick.

Q: So, sometimes he would stop in front of you?

A: Yeah.

Q: And the sand would blow on you?

A: Yeah.

Q: Now, did he always stop in the same place?

A: No. A lot of times he was farther back and he would stop. In other words, just when he got close to the end, ready to pull up, he'd be right next to me.

Q: Did you know when he was going to stop?

A: No, I didn't know how many cars he would cut. I'd just start taking the numbers and when [25] he cut the car I quit the numbers and I got the last number.

Q: So, would it be fair to say that when he came along—this locomotive comes along, it might stop right in front of your [sic] or it might stop passed?

A: Yeah.

Q: So you never know—

A: Or it could stop back behind me just some.

Q: So when he stopped in front of you that's when you got the sand blown on you?

A: Right.

Q: So you never knew when you were going to get sand blown on you?

A: No. Huh-uh.

Q: Now, when this sand blew, is this a big cloud of dust or enough to get on you?

A: Well, it was enough to get on you. It would come out of there and hit and blow up in the dust, along with coal dust.

Q: Could you see this sand when it was a dust? Could you see it in the air?

A: Yeah.

[26] Q: And would it get on your clothes?

A: Yeah.

Q: Did it get on your face?

A: Yeah.

Q: Would you also breath that in?

A: Yeah, there's no way out of it.

Q: Did you cough that up?

A: Oh, yes, sir.

MR. PAULEY: Your Honor, I'm moving onto a different area now. I think it'd be a good place to stop and break for lunch.

THE COURT: Okay. Folks, we'll recess until 1:15.

(WHEREUPON, a recess was taken for lunch, after which the following proceedings were had.)

[27] AFTERNOON SESSION

WHEREUPON, after the recess was had, the proceedings continued in open court, to-wit:

THE COURT: Mr. Shirley, come back and take the stand, please, sir.

BY MR. PAULEY:

Q: Mr. Shirley, when we broke for lunch we were discussing your sand on the railroad?

A: Yes, sir.

Q: How that you, standing nearby the train when it passed, it blew sand on you. I'm going to ask one more question on that, when you—when the sand came out did that sand just go on the track or was it on the wheels and the brake system of the train?

A: To the best of my ability it was on the—it goes down on the rail and it points so that it goes right straight in the wheel and the rail. It hits both at the same time.

Q: Okay. Did it ever get blown up into the wheels of the train?

A: When they would take and yes, with the steam cars it did.

Q: Did that further make it dusty?

[28] A: Sure it would make it dusty, yes.

Q: So, as I understand it, your basic exposures to dust on the railroad included the asbestos that you were loading and unloading?

A: Yes, sir.

Q: Asbestos in a building—buildings you were in?

A: Yes, sir.

Q: Steam pipes?

A: Yes, sir.

Q: And the sand off these locomotives?

A: Yes, sir.

Q: Okay, and just to make it clear, the locomotives coming by have sand in the box, raise it on the rail—

MR. ADKINS: Your Honor, I'm going to object. That's not asking questions. I think he's deciding all the testimony we've already heard.

THE COURT: I'm going to permit a little bit of preface. I'll permit it, so long as he doesn't testify to it.

BY MR. PAULEY:

Q: So, if I understand this correctly, the [29] train goes by, sand gets thrown onto the track, kicks up, goes to the wheels, creates dust, gets on you, is that correct?

A: Yes, sir.

Q: And you breath that in?

A: Yes, sir.

Q: Would you say that your work on the railroad for twenty-nine years—would you say you worked in dusty conditions fairly often?

A: Yes, sir.

Q: Would you come home with dusty clothing?

A: Yes, sir.

Q: Did the railroad—anyone from the railroad ever tell you that asbestos was harmful to your health?

A: No, sir.

Q: Did anyone from the railroad ever tell you it would cause a disease?

A: No, sir.

Q: Did anyone from the railroad ever tell you that asbestos would cause cancer?

A: No, sir.

[30] Q: Did anyone from the railroad ever tell you that sand or silica would cause disease?

A: No, sir.

Q: Did anyone from the railroad ever tell you that sand was harmful to your health?

A: No, sir.

Q: Anyone from the railroad ever tell you that silica and sand may cause you cancer?

A: No, sir.

Q: Did anyone from the railroad ever tell you you should wet down dust?

A: No, sir.

Q: Did anyone from the railroad ever tell you you should wear respirators or dust masks or inhalers?

A: No, sir.

Q: No one ever did in those twenty-nine years?

A: No, sir.

Q: Did anyone ever—did you ever see anyone from the railroad, or anyone at all, taking air samples around areas you were working?

A: No, sir, not that I recall.

[31] Q: Mr. Shirley, when did you first determine that you had a dust disease? When was it first conveyed to you that you had a dust disease?

A: The best I can recall is when I was at Dr. Gaziano.

Q: Gaziano.

A: Gaziano, he told me that I was worse than I were before and that I had dust.

Q: Okay, worse than you were before. Was there a time before that you got diagnosed?

A: Yes, I had been x-rayed, previously.

Q: Do you know when that was?

A: No, sir. I don't. I don't—I just don't recall the date. It was back—I just don't recall the date of when it was. Probably, if I'd say I'd just be guessing. Probably, '91, '90, somewhere along that line.

Q: To the best you can remember it was around that '91, '90?

A: Yes.

Q: And you said that Dr. Gaziano had said you were worse than you were before?

A: Yes, sir.

[32] Q: Do you experience today what you believe to be unusual shortness of breath?

A: Yes, sir.

Q: And could you explain that to the jury?

A: Well, anytime, no matter what I do, I could just be talking and I'll run plum out of breath. I can't talk but just a period of time and I'll have to rest. But if I just like walk

from yonder over here, a lot of times—most of the time I'll have to stop and lean up against somewhere.

That's why I've got a cane, to lean and stop, just so I can get a little air. I cannot go up and down steps without taking a break half—just a few steps. I can't walk any long distance. I just don't have no air and I can't—well, I used to sing in the choir.

We used to sing at Church, but I don't have the wind. I can't hang onto the notes.

Q: Now, you say you can't do these things. You can do these things, it just makes it harder? Is that what you're saying?

A: Yes, sir. I just run out of air. I can start, but I can't finish them.

Q: You mentioned the walking, how far do [33] you think you can walk without getting short of breath?

A: Probably from here to the outside out there, maybe a little farther.

Q: Do you start getting short of breath?

A: It just depends. Yes, sir.

Q: Any other things around the house that cause you problems?

A: Well, I can't do my housework. I help my wife some when I can, but if I could set down I could push the sweeper a little bit, but I can't stand up. It just—I'm just wore plum out.

Q: So, you're saying that you have trouble doing household chores. Is that what you're saying?

A: Yes, I do.

Q: Now, you've talked about climbing steps and walking and so forth, and I think you mentioned you had a problem with your ankle. Has your ankle also hurt you in doing these things?

A: Well, my ankle is a lot of my walking problems, but now my breathing problem, that's different. Yes, I do

have pain. Arthritis is in my legs and in my knees and I do everything.

Q: Let's talk about something that [34] wouldn't involve your ankle injury, like you were talking about singing. Do you have problems singing?

A: Yes, sir. For thirteen years I traveled and sang with a group, and we sang, I guess, in twenty-five different states.

Q: What kind of group was this?

A: A gospel group.

Q: And you sang in different states?

A: We sang in North Carolina, South Carolina, Virginia, Tennessee, and we even sang in Canada. We traveled just on the weekends so we could be back in time for work. But we broke up in the mid '80's and I couldn't hold my notes, I couldn't sing no longer.

So, I got down to where now I can't even do a line of a song. I've got no wind. It quits on me.

Q: Do you go to Church?

A: Yes, I do.

Q: Do you sing there?

A: Just a part of a line and then I can pick up on a line and go, but I can't hold the notes. I can't sing long enough.

Q: I don't believe I touched on this earlier. Do you smoke?

[35] A: No, sir.

Q: Have you ever smoked?

A: Back when I was a kid I tried it but it wasn't for me.

Q: You tried it? Did you try it for four or five years?

A: Oh, Lord, no. I tried it and it made me drunk and shimmy headed and dizzy and I had to lay down. So, I mean, it just wasn't for me.

Q: So you never smoked?

A: No.

Q: Have you ever tried any other tobacco products?

A: No, sir.

Q. Ever chewed?

A: I tried chewing once, and a little bit of it went down my throat and I like to died over that, so I seen that wasn't for me either.

Q: What other kind of health problems—we've talked about the ankle and we've talked about the shortness of breath. What other kind of health problems do you have?

A: As far as I know, none.

[36] Q: Do you have any heart problems?

A: Well, yes, I'm sorry about that. I did—when my doctor diagnosed me as a heart condition. He said over the years that my valve, the main aortic valve had begun to close up and they sent me for surgery. I had surgery in 1995 in July and when I come back from surgery it was successful, and I had no problem whatsoever and I done good.

After a while I had better breath—better air, but then it gets worse on me again. It got back worse than it was then, the breathing, but I went down hill after a while. And I'm on medication. I'm on—I have to have one seven-and-a-half gram pill that I take a day to keep my blood thin, because the transplant that they put in me, it wasn't—it was the man-made one.

Q: When did you have this heart surgery?

A: In '95.

Q: Was that a successful surgery?

A: Yes, sir. It was.

Q: I guess it was, I see you today.

A: I done real well with it and he was real pleased, Dr. _____ was.

[37] Q: Even though that heart surgery was successful, did you have shortness of breath problems after the surgery?

A: Yes, I did. Yeah. I sure did.

Q: Was it any better after the surgery?

A: It was better after the surgery for a while but then it got back on me again. I started going back down hill with it.

Q: Compared to before your heart surgery, is your shortness of breath worse then, or today?

A: It's worse today.

Q: Is it getting better or worse?

A: No, it's getting worse.

Q: I want you to explain to the jury how this shortness of breath and this dust disease has affected you mentally?

A: It's really made a nervous wreck out of me. See, when Dr. Gaziano told me that I was worse than I was before, well, you know, nobody wants to die. We all want to live as long as we can. But I get to thinking about my family, my kids, and I'm just trying to make preparations and just have everything in order.

I don't know, but the only thing he tells me [38] is that it can't get better. It's going to get worse, and after all these years when you come down like this, you know, you get to missing a whole lot of things you can't do. I get depressed sometimes.

My wife, sort of talks to me, and that's because I get to thinkin' I'm gonna die with it, I don't know. But I've just got to keep going on. You can't do no more.

Q: Do you, Mr. Shirley, do you worry about cancer?

A: Yes, I do.

Q: Could you tell me a little bit about that?

A: Well, since all this come about here, and the way he talked to me and then I've got a brother-in-law that he's worse than I am. And his is in, I think, about the third or fourth stages, but I don't know how many stages you go through, but he's scared about it, too; and I think anybody, you know, that has anything that pertains or leads in that direction, you know, it really can destroy you inside.

You just figure, what's the use, you know. He can't do this and he can't do that. Why do you care? [39] Why do you go on, but you've got to go on because we can't stop. We've got

to keep fighting and keep going ahead, and that's the way I try to look, too.

Q: Are you more afraid of the shortness of breath or are you more afraid of the cancer?

A: I'm more afraid of the shortness of breath because I'm just closing out more and more every day. And I don't know just how I'm gonna go, you know, but I'm real worried about the shortness of breath, and I don't know of anything you can do about it. The only thing I know is pray, and God knows in heaven I try to do a lot of that.

Q: I just wanted to ask you one more question, when—about the sand on the railroad tracks?

A: Yes, sir.

Q: Did that sand get broke up?

A: How do you mean, into dust?

Q: Yes.

A: Well, when it was crushed it would get broke up. Yes, I'd say.

Q: Is that what caused most of the dust?

A: Yes, I'd say.

MR. PAULEY: I have nothing further.

[40] (WHEREUPON, direct examination was concluded as the testimony continued.)

TRIAL TRANSCRIPT
April 17, 1998

Johnson Testimony

* * * *

[3] (Witness sworn)

THEREUPON CAME,

DOYLE RAY JOHNSON

who having been duly sworn to tell the truth, testified as follows:

MR. BOITER: Good afternoon, Mr. Johnson. How are you?

MR. JOHNSON: Fine. Good afternoon.

MR. BOITER: I know you have some hearing difficulty so I'm gonna try to talk loud enough for you to hear. You made me promise to face you. You do a little lip reading to try to understand what people say?

MR. JOHNSON: Yes, sir.

MR. BOITER: If you don't understand what I say, you just let me know. I'll be glad to repeat it and I'll try to look at you and speak slowly while I talk to you.

DIRECT EXAMINATION

BY MR. BOITER:

Q Would you tell the jury your full name?
A Doyle Ray Johnson, Box 2584, Williamson, West Virginia.
Q How long have you lived down in [4] Williamson, West Virginia?
A At my present address?
Q Yes, sir.
A Twenty years. The past twenty years.

Q Where did you live before that time?
A Well, I lived in South Williamson, Kentucky, for approximately fourteen years, then about ten years in Sprig, West Virginia, ten years at Cedar, West Virginia.
Q Are you married?
A Yes, sir.
Q Is your wife here in the courtroom with you today?
A Yes, sir.
Q Is that her sitting back there in the back?
A Yeah.
Q Do the two of you have any children?
A Three.
Q And I've sort of been asking everybody: Do you all have any grandkids?
A I've got six.
Q Have you and your wife helped take care [5] of the grandkids?
A Well, since she retired, we baby-sit for them. You know, for one of them. And like when schools out, every evening when they get out, they come to our house cause every one of their mothers or daddys a' workin'. And they come by, you know, after they get off work at five o'clock, six, pick 'em up.
Q How long have you all been helping take care of the grandkids?
A Ever since they've been born.
Q How long is that?
A Well, one is twenty-two.
Q Do you have any great grandkids?
A No.
Q Is there any truth to the rumor that the reason you don't is because you told them you didn't want them to have kids because you were tired of baby-sitting?
A Yeah, I was tired of baby-sittin'.

Q I'm not sure if I asked you this, let me do it again, when I got started off. How old are you? I want the jury to know.

A Sixty.

[6] Q How far did you go in school?

A I went to the ninth—tenth grade.

Q You quit after the tenth grade?

A Yes.

Q Why did you quit after the tenth grade?

A I got a job on the railroad.

Q Went straight from school to the railroad?

A Yes, sir.

Q Did you ever serve in the military?

A No, sir.

Q Have you ever smoked?

A Yes, sir.

Q When did you start smoking?

A I was about eighteen when I started smoking.

Q About what year would that have been?

A About '55.

Q How long did you smoke?

A I smoked until about '68.

Q Did you smoke continuously during that period of time?

A No, I quit between '68 and '70 for about [7] two years. I quit smoking.

Q Did you pick smoking back up after that?

A I picked smoking back around about '70.

Q When did you finally quit smoking for good?

A In '87. November of '87.

Q How many packs of cigarettes a day did you smoke when you were smoking?

A I'd smoke a pack a day.

Q I want to talk to you a little bit about your railroad work history.

When did you first go to work for the railroad; what year was it?

A October 1952; 2nd of October.

Q Where did you go to work for the railroad?

A At (inaudible), West Virginia.

Q Do you remember what you hired in doing?

A I hired in on an extra force. I was the water boy.

Q What did a water boy do on the extra force?

A Oh, take care of the water barrels, you [8] know, keep ice in them, fresh water. A gang had, I think a gang had about thirty some men.

Q What did that gang do? What kind of work?

A They laid mine tracks, laid the track in the yard, they dressed ballast by hand. Back then, by hand manually, you know.

Q Did you—were you doing anything else at the period of time that you were also on the extra gang?

A No, I went from the extra gang to the section gang on the following spring. Along about April when they put all the men back to work. Cause it was a higher paid job. I transferred from the extra gang to the section gang.

Q How long did you work the extra gang; from 1952 to when?

A Fifty-three.

Q And when you were in the section gang, how long did you work in the section gang?

A I worked the section gang from about '53 to about '55.

Q What type of work did you do in the [9] section gang?

A Well, we put in broke rails, installed ties, and labored, generally, to refine our track area in the yards.

Q During the period of time from '52 to '55 when you were working those gangs, do you recall ever doing anything that would have exposed you to asbestos?

A Yes, sir.

Q Would you tell us what those are?

A Well, we'd have to go in the roundhouse. You know, if we had broke rail we'd have to go in the roundhouse and they'd give us a stall, that whatever that rail was broke, to put it in. And you had to get it out of concrete. It was a pretty hard job. You're talking about, maybe, six, eight hours a day just to get one broke rail. That's where I come in contact with my first asbestos, was in the roundhouse.

Q Okay. What were they doing in the roundhouse while you were doing your work?

A They was tearing down each of the 2100's, the jackets off the side of them and the front of them.

Q What's a 2100?

A That's a engine.

[10] Q Steam locomotive?

A It's the biggest one.

Q Was a 2100 as big as this one? (photograph)

A Bigger.

Q Is this representative of what you saw go on while you were in the roundhouse?

A Yes, sir. And sometimes they would just take the front off. You know, they've got the rings on the front of the engine. You had your headlights and you had your number right on the middle of that ring. Well, they'd take all `them bolts out around that ring, pull that ring off, and you could see back in there to what you was gettin' into to start with.

Q Any other exposure—let me back up a second. What type of—did you actually see folks removing asbestos off of these steam locomotives when you were doing that work in the roundhouse?

A Yes, sir.

Q Were you in there at times when you saw people applying asbestos to the steam locomotives?

A Yes, sir.

Q About how often would you have actually [11] been working in the roundhouse during that period of time?

A Maybe you'd go in one day a week, or some days they had two broke rails, you'd have to go in two days. Then you might go for a week or two and you wouldn't go at all.

Q Would you explain to the jury how a roundhouse is set-up; how you get an engine in and how the whole system sort of works?

A Well, can I get up on the wall here and show 'em?

Q How about I bring a chart around and let you—

A Yeah. Bring me one.

Q I take it you're an artist?

A Yeah. Good, too.

(Indicating) Now, this all over in here was all your yard tracks. They go straight through. And this right here was a turntable, and you had seventeen stalls in this roundhouse. Now, the roundhouse at Williamson, it didn't go all the way around. It just went from this point right here to this point right here.

[12] And they could take and bring an engine in on one of these tracks right here and put it on this turntable and they had an operator in there, in this little box over here, and he could run a engine around anyway they wanted it; and, you know, put it on any of them seventeen stalls. And that's the way they done it when I was there at Williamson.

And this lead track over here, this right here, as I say, it was on a turntable that would go around. And they could operate on all seventeen tracks. And this one track right here went all the way around back behind the storehouse where they could get boxcar supplies back there.

Q So this was actually a turntable, but the whole thing was just sort of set up in the round so they could just slide locomotives in the stall?

A That's right.

Q If you were working, you had to come in and do repair work, say, on this track, could there be other locomotives in these other tracks where you were working?

A Oh, yeah. Say, maybe, they wouldn't be working number eight, they'd give you number eight. [13] Well, there would be a train over here in seven and there would be one over here in nine. They'd have one, maybe, in eleven, and one in ten and twelve.

Q During the period of time from 1952 to 1954, were there any other places that you worked where you had been exposed to asbestos?

A Yes, sir. In the yard; in the Williamson yard.

Q Would you tell us how you would have been exposed in Williamson yard?

A They had switch heaters. They was about two foot long and about four inches wide.

Q What did you use a switch heater for?

A To melt the snow on the switches, you know, when it would come a snow.

Q Okay.

A And they would put kerosene in the switch heater and they had like a valve on the end of it and they'd take that asbestos back in that valve. They had a little lid that went over top of it and you push—open the lid up, set it on the switch and you'd light it. Well, it burned real high, maybe that high to start with and you would push that lid back, cut the flame [14] down until you got it where you'd want it. Cause they wanted it to come up about halfway to the bottom of the rail. You'd just have to go back in there, maybe, as long as two or three days, nights, and you'd have to go back and fill it up with kerosene.

Q Did you ever have to remove the asbestos out of those heaters?

A Yes, sir. They'd take them in—most of the time they'd do that in the fall—like they'd pull them out of there in the summer cause we'd be doing the work on the track. Well,

along about October, they'd take all that packing out of that switch heater, and put new packing in it, and take metal reserve and patch the metal. Then they'd stack all behind the coolhouse, ready for the first snow.

Q Was the packing that you took out of there, was it clean, was it dirty?

A It was dirty.

Q Did it generate any dust when you took it out?

A Most of the time it was wet, you know, damp.

Q In the fall it would be damp when you [15] took them out?

A Yes.

Q Okay. During the period '52 to '54, were you exposed to any other dust besides asbestos in the places where you worked?

A In the yard?

Q Yes, sir.

A Was I exposed—repeat that again.

Q The '52 to '54 time period, we've talked about asbestos. Were there any other dusts that you were exposed to in any of the work that you did?

A Yes, sir, the coal dust in the yard and the sand from the engines.

Q How were you exposed to the coal dust?

A Well, the wind blowing. You know, it was dusty in that yard.

Q Where was the coal dust out in the yard?

A It was everywhere in the yard.

Q Was it in cars, or was it just out in the yard?

A It was on cars, you know they had cars stored there, and it was loose on the ground where they'd be a switchin' cars, knocking it off cars and [16] things out in the yard.

Q Did you go on to do something different at the railroad in 1955?

A I started helping a welder.

Q How long were you a welder helper?

A From '55 to about '58.

Q Tell us what a welder helper is and what you did as a welder helper?

A My job was—the welder would build a rail end up and he had a flatter that he put on the rail while it was hot, and I'd take a—

Q I'm gonna stop you. Explain to us what you're talking about so we understand, us non-railroad people understand what—describe what you're talking about as you do that.

A Okay. Every joint where two rails come together, the wheel will beat and knock that joint down. So the welder, he comes by, we do, and welds a strip of metal across it. And he takes a flatter and holds that flatter on there and shapes and contours the rail up. And I get the flatter ready.

Q Was that your primary job responsibility during that two year period?

[17] A Yes, sir. And, plus, we had more work to do. Like they call them driver burns. It's where a engine wheel will slip out in the middle of the rail. Well, you've got to go back there and take and put bars on it because you can't heat that rail. If you do, and a train comes, you've lost your rail. It would mash it.

Q Let me stop you for a second. What were you doing while you were heating the rails up when there was an engine—had a wheel burn?

A See where that engine burned, the metal would be fractured. You would grind that out and build that back up with your metal, and then grind it down.

But you had to put bars on it. We put, they said, regular angle bars. You put two angle bars on it. You dig out under the rail and run a clamp through all the bottom of the bar and tighten it up with a big ratchet.

When you was a weldin' that rail, if a train come, it wouldn't hurt it. It would mash it a little, you know, but I mean, it wouldn't damage it.

And they had a roll of asbestos that they'd roll off and cover that plank with. Because if you let that hot metal, you know, you let a spark or [18] stuff get down in that clamp, you won't get the clamp back off.

Q I'll ask you, if you don't mind to come down and draw us—let me make sure the jury understands what you're—can you just sort of demonstrate?

A Oh, yeah. I can do that. Now I'm gonna draw the rail facing in. (Illustrating) Now this here is the top of the rail where the wheel runs off of the engine. This is engine burn—when a wheel slips on an engine it'll jerk a piece of metal out, maybe shaped like that. It'll be flat down, maybe a half inch. We take and grind this out, this fractured metal, grind it down where it's clean metal, nothin' fractured.

Then we put a pair of angle bars on it. An angle bar is a thing that holds two rails together, joins them. It's got six bolts in it. Well, you can't drill a hole in a regular rail, in the middle of a rail, so the company had a clamp that they would dig out more of this crib, here, and put that clamping on that. They had a C-clamp and they'd tighten that up to pull that bar in. Because when we started workin' out there and buildin' that rail, if you got that real hot, and a [19] train come along it wouldn't hurt it, but if you didn't have that bar on there, you'd mash that rail, and maybe, wreck the train.

Now, this clamp now, mind you, had threads on it. It would be like this here. (Indicating) Well, they'd take a roll of asbestos they had and they'd cover it up like that right there; and put a piece over on this side. Then we'd go ahead and do it all the way over in there, and when we got done welding, we'd pull that off and put it in the tool box.

Q Sir, you pointed down here and said something about a crib. Explain to the jury what that term means.

A A crib, well. (Illustrating) This is two rails right here, this is a tie, and right here is another tie. This is a crib tight

here, the dirt and rock that's right here between them two ties. You got another tie over here, you've got a crib there, you got another tie, you got a crib. That's what the company calls a crib. That's from this rail to that rail; the dirt and rock there.

Q Would the asbestos that you used to lay across there, would it get dusty dirty?

[20] A Yes. You could use the same piece, maybe, a week or two.

Q Would you actually get dust on your hands or your clothes, or anything like that when you used it?

A Yes, you would.

Q Do you recall any other types of asbestos that you used during that period of time when you were a welder helper?

A Would you repeat that again?

Q Do you recall any other uses, anything else you used asbestos for during that two year period when you were a welder helper?

A No, sir.

Q Do you recall during that two year period of time whether you were exposed to any coal or silica?

A Yes, sir. Cause we'd be workin' in the yard. Most of the coal dust, you understand, you're gonna run into it in the yard.

Q After you left the position of welder helper in '57, what was the next position you held?

A I went to work on the bulldozer and endloader at the coal pier, Pier 5, Norfolk, Virginia.

Q Would you tell the jury what you did as a [21] bulldozer operator on the coal pier in Norfolk? Would that have been about 1958?

A '58. The first part of '58.

Q Tell the jury what you did there.

A They had—the coal pier in Norfolk was where the company dumps their coal in the pier cars and they take 'em out on a elevator and take 'em up over top of the boats. And

they run out over top of the boats. The boats come in and they dump coal on top of that elevator. Right where they dump it it goes down through a bin into the boat. Then that pier car goes on out, goes through a switch, and comes back down a ramp. It comes down a ramp built back there and comes back in on the pier.

Well, they've got this dumper there. When it dumps the coal in a pier car, it picks the whole car up, turns it up and pours it out. When they set it back down, what coal they waste, I'd have to whenever one went out, I'd go in there with an endloader and pick that loose coal up. The way I done it, I'd just push it in a corner, maybe three or four bucket loads. Then I'd pick it up out of the corner and take it out and they had a conveyor, and I'd dump that on a conveyor and run [22] it back up in a car. And when they got the car full, they'd dump it back in the—

Q Was your work at the coal pier, was it still an N & W job?

A Yes, sir.

Q You were still working for the railroad during this period of time?

A Yes.

Q Do you believe you were exposed to any coal dust while you were working that job?

A Yes, sir, you couldn't see me in the evening when I got off work.

Q What do you mean by that?

A For the dust. You could see my eyes and maybe around my mouth a little bit.

Q I see.

A Cause see, when you was out there on the Chesapeake Bay, when you dump that coal on that conveyor, there would be that dust come up back in your face.

Q If you were working out on the coal piers, using the loader to pick it up, how long would you have to work picking up coal to fill an entire car [23] of coal?

A You could usually run—I'd say, maybe, from five to eight days that you'd have a loaded car; a hundred ton hopper.

Q And so, basically, every five days you'd pick up a hundred tons of coal?

A Yes, sir. Every five to eight days.

Q Is that pretty much what you did all day, everyday during that period of time?

A When I was on the loader that's all I done.

Q Now, how long did you work this job down in the coal pier?

A I was there. I'd say, for a period of about eight months.

Q After you left the coal pier, what did you do next? Are we still at 1958?

A Yes, sir.

Q Okay. What did you do next?

A I come back to Williamson yard and that was about the period of time that the company was making the change bringing the shop from East Williamson, down puttin' it in the roundhouse. You have to understand, [24] after we went to diesel, the roundhouses stood vacant. Well, shop track was up in the East yard, so they moved it from the East yard down and put all their entire work in the roundhouse.

Q So they just changed locations?

A That's right.

Q Starting in 1958, what types of work did you do at the railroad?

A From '58?

Q Uh-huh.

A I run a backhoe for a proctor gang. And their duties was just to take care of the maintenance work on the

roundhouse in Williamson, and bridges, and stuff like that, you know. That's all they worked on was buildings.

Q Anything else—I'm trying to find a convienient time for us to talk about—after you did that, what did you do next?

A Well, I stayed on that up to about '65, I'd say.

Q So, let's talk about '58 to '65 then. Describe in a little more detail the types of work you did from '58 to '65 and what it involved?

[25] A Well, it involved—they was making these changes at the roundhouse. They tore out all the tracks that went through the roundhouse and remodeled it, and they took up all the floor.

Q How were they doing this?

A Well, I did it with a backhoe. The floor now, was a four by ten creosote board and when they laid them, I think it was in '23 when the roundhouse was built, they sawed them off like a four inch brick; and they had concrete that went around the walls and where you went out the doors. But in between the tracks, they had that wood. And I asked why they had that for and they said it was easier for the men to stand on all day. Well, when they remodeled the shop, they dug all that up, and when they put it back down they put concrete.

We put four sets of hydraulic jacks in, took the pits out of four tracks and put four sets of hydraulic jacks in.

Q Okay. How long a period of time were you involved doing that kind of work at the roundhouse?

A Up till about '68. We stayed there in that roundhouse, you know, remodeling.

Q Were you exposed to any asbestos [26] containing products during that period of time when you were doing the remodeling?

A Yes, sir.

Q Tell us how.

A It was in that floor, that wood. Cause see, we had to take a backhoe and dig 'em up, and loaded 'em in a dump

truck; and took 'em to a clean-out track. See, Williamson had a clean-out track. They had a clean-out track for the whole railroad. They sent everything to Williamson and throwed it over the river bank.

Q What kind of asbestos was in the floor?

A I would assume it was from the engines and a lot of it was from these pipes where--there's a steam line through there. See they pulled all of that out of there in '65 to '68, when they remodeled.

Q What did you do next, after '68 when you got done with all this, what type of job did you go to next?

A From '68, I went to a tie production gang and ballast gang. I run a tie crane, I run tie saws, I run sky fire, I run tie hammer, ballast regulator, tampers, electric tampers, whatever piece of equipment [27] they had on one of them gangs, I was qualified.

Q What is a ballast regulator?

A A ballast regulator is a machine—it's got boxes built on the side of it. Everything is hydraulic controlled. Like if they dump the ballast and they service the track, they take a ballast regulator—

Q I'm gonna stop you just a second. What is ballast?

A It's rock.

Q Okay. Go ahead. I'm sorry.

A They have a plow in front of it and you can split the plow. Like if you want to put rock over on one side, you can, or if you want to put it over on the high side.

Q I need you to be an artist for me again.

A All right.

Q So we all understand what we're talking about. Think you can draw this one?

A Yeah. What are we gonna draw?

Q Explain the ballast regulator and how it works in relation to the tracks—what you were doing.

A Okay.

THE COURT: Ballast is just the rock [28] between the ties that the track sits on.

THE WITNESS: About like that, but they call is [sic] ballast.

THE COURT: Right.

THE WITNESS: These little marks right here (illustrating) cross-ties. When they service—first they dump this ballast on this track. They come through here and dump it plum to the bottom of the rail. It's about eight inches of ballast, and they raise this track up. They got a tamper that comes through here and they just tamp each tie, that rock under each tie. Then after he leaves here they got a machine that'll come through and line it. It's got a kink—you line that track back that-a-way and that-a-way.

Well, when they get ready to dress it, they got a ballast regulator that'll come through here. He's got a plow on the front of it, like this right here, and they let that plow down and they can just push that rock right off the track over this way or that way. If they want to put it all over on this side, they can split this wing, take a flat shoot right here and one right here, and they can bring this wing and make it come just like that. They can throw every bit of that [29] rock back along the low side. If they wanted to reverse it, they could do it this other way and bring it back to the high side.

They got two boxes that comes out on a machine and they make something like this right here. We laid this down, and he hooks them in again the track. That's what shapes the berm, makes a roll on the track. You go through there with them and it makes a roll.

Now, on the back end, what rock is left, you know this plow won't get it all out, they got a big broom that's got knobs on it like that. They are a rubber air hose is what they are. They'll turn that broom on and back up with that machine

and they'll sweep that tie. Sweep every bit of that rock off. That's the machine that'll give you your dust.

Q When this machine was in use, would the rock actually get pushed around and crushed up?

A No. It just whipped up the dust, you know. It wouldn't mash the rock or nothin', you know, it would just push it off of the track.

Q During this period of time was there a job that you worked on where the railroad rented a machine from the Speno Company?

[30] A That's in the year—'73 was the first year I worked on the Speno.

Q Would you spell it for us?

A Speno? S-P-E-N-O.

Q Okay. What type of machine was that that you used?

A It was a ballast cleaner.

Q Explain to us—you talked about a ballast regulator, explain to us what a ballast cleaner is.

A Do you want me to come over there?

Q Well, you can probably tell us. Tell us and we'll see if Mr. Rion understands—

A A ballast cleaner, a Speno ballast cleaner, it had a scoop on each side of the machine and it would go about two foot down over the tracks and it had a eighteen inch belt on it; and they pulled it with a diesel engine. And when they'd start pulling it, that scoop, the rock would come up through that scoop, and go through the conveyor and take it to the top of the machine. Well on the top of that machine they had big shakers and they was a vibratin', had vibrators on 'em. And when that rock hit over in that vibrator, the dirt [31] went down in what you call a hopper. Well the rock would slide off in a baffle box, they called it. It was just a big box in a machine that held rock.

Well, they's pulling you along so you had two operators on the front picking it up, and it'd go over in that hopper shaker,

and the dirt that went down along there, you had a short belt that would throw it over the bank. Well, now you had two operators sittin' behind that short belt, and they'd regulate that ballast back down in that hole where you just picked it up out of. And they had one man on the top that run the boom. He controlled all the booms there.

Q I'm not gonna try to be an artist. I'm gonna draw two lines. Were you talking about picking it up on the outside of the tracks? Is that what we're talking about?

A Yes, sir, right at the head of the ties.

Q You pick it up here (indicating), it goes in the machine, and it comes back down behind it?

A Yes, sir. You could average about eight mile a day if you had no breakdowns or no train delays.

Q How long a period of time did you work on the Speno machine?

[32] A From '73, to the last year I believe I can remember workin' on that was in '84. That was the year we had the floods in Williamson and they sent two over there to clean that track that had just flooded from Williamson to Bluefield. I'm gonna say eleven years. And the time that I would work on it would be like—it was a seasonal job. It would come out about the first of April and they'd work it up till November if it didn't rain, or no freezy or no rainy weather.

Q How did this process, or did this process generate any dust?

A Yes, it did.

Q How was dust generated from this process?

A In the shaker and all of the belts a turnin' and a carryin' that coal dust. It was just like a coal tipple.

Q Like a coal what?

A Tipple.

Q What's a coal tipple?

A That's where you run coal through the tipple and crush it; process it.

Q Explain that one. How does a tipple process it?

[33] A Well, it takes coal, see raw coal—

MR. ADKINS: Your Honor, I fail to see—you know, I don't think we're—I fail to see—I mean, it's interesting, but I fail to see how it's relevant—coal tipples—they're talking about a Speno machine.

MR. BOITER: He said that's what the machine did.

MR. ADKINS: Well, I understand that, but they're not running coal through it.

MR. RION: They're running rock through it.

THE COURT: Go ahead.

BY MR. BOITER:

Q The rock got crushed up is what you're telling us?

A No. What I'm telling you is you—that machine put out as much dust as a tipple did when they was processin' coal through it; raw coal.

Q Did the railroad ever provide you with any respirators for this job?

A The railroad?

Q Yes, sir.

A No.

[34] Q Did somebody else give you a respirator on this job?

MR. ADKINS: Now, Your Honor, unless they have something to show—I'm not sure what we're getting into here. But unless they have some evidence, or something, or qualify him to answer this question, I'm going to object to it.

We'd like to approach, if we could.

(Whereupon, a discussion was held out of the hearing of the jury)

MR. BOITER: He said in his deposition the Speno Company, which they rented this machine from, provided them with a respirator.

MR. ADKINS: A laborer or machine operator doesn't know whether a machine is leased, he doesn't know who Speno is, there is a mask in there, he doesn't know where the mask came from. I think this is highly prejudiced.

THE COURT: Why do you say that?

MR. BOITER: He said he does.

MR. ADKINS: They have not qualified him to do that other than somebody told him to do that. It's [35] hearsay anyway. There is no way this should come in. I mean it's very prejudicial, Judge. He's not qualified to give the answer, he's got to have personal knowledge.

MR. BOITER: He says—his testimony is the Speno Company provided him—they came with a pack of respirators that were used up in about a month.

MR. ADKINS: But he doesn't know where those came from.

THE COURT: How does he know where they came from?

MR. ADKINS: He doesn't.

MR. BOITER: Just his own personal knowledge.

THE COURT: The supervisor, the Speno man sent a supervisor out with the machine—

MR. ADKINS: It's hearsay, Judge.

THE COURT: I think he can testify that they had respirators from some source for a period of time, otherwise if the company representative—

MR. ADKINS: It's hearsay, Judge. They'll have to lay a foundation.

THE COURT: Well, he can identify who the guy was. This was the guy from the railroad company—

[36] MR. ADKINS: I think this is highly prejudicial, there is not a proper foundation, there is no reason for them to interject this into this trial. It doesn't establish anything.

THE COURT: Yes, it does. It establishes—

MR. ADKINS: Sure, but the company would say that it provided operators nothing about lease agreements.

THE COURT: We'll just ask him what he knows. We'll take a five minute recess, folks.

(Jury excused)

(Whereupon, the following took place out of the presence of the jury)

BY MR. BOITER:

Q When the railroad rented the Speno machine—

MR. ADKINS: Judge, wait a minute, now. He's leading. Just ask him what he knows.

BY MR. BOITER:

Q Did the railroad own the Speno machine?
A No, sir.
[37] Q Where did the Speno machine come from?
A Syracuse, New York.
Q Did anybody from Syracuse, New York, come with the machine when it came?
A A superintendent.

MR. ADKINS: Okay. Was that a Speno superintendent, or a railway superintendent?

THE WITNESS: A Speno superintendent.

MR. BOITER: When the machine and the superintendent came, would you have been around when the machine arrived there?

THE WITNESS: Sometimes—No, no. The company usually had the machine sent to a location and it would be advertised, and we'd begin and we'd go to it—like if it came in on Sunday night and we's gonna go to work on Monday mornin', we'd report to it on Sunday night. It might a come in and be sittin' there for a week, you know.

MR. BOITER: When the machine arrived in the spring, were there respirators with the machine, masks?

THE WITNESS: Most of the time there was. Not a respirator, now. There's a difference between a [38] respirator and a spray mask.

MR. BOITER: Just a spray mask?

THE WITNESS: Yeah.

MR. BOITER: Do you know who provided those spray masks?

THE WITNESS: The Speno Company.

MR. BOITER: How do you know that?

THE WITNESS: Cause they was in their tool car, locked up in their tool box.

MR. BOITER: That came with the machine?

THE WITNESS: With the machine. Band aids, dust masks, Mercurochrome. It was like a little first-aid kit.

MR. BOITER: How long were those dust masks available when the machine got there in the spring?

THE WITNESS: You mean, how long would a box of them last?

MR. BOITER: Yes, sir.

THE WITNESS: Maybe, five or six weeks.

MR: BOITER: When those respirators were used up, or those masks were used up, were there anymore for the rest of that season using the machines?

THE WITNESS: No, sir. You couldn't get [39] 'em to get 'em.

MR. BOITER: Is it from your own knowledge that you know the respirators were provided by Speno?

THE WITNESS: Yes, sir.

MR. ADKINS: How do you know that, sir?

THE WITNESS: Cause it was in a locked boxcar.

MR. ADKINS: Who put those masks in the box? Did you see anybody put them in there?

THE WITNESS: No, I didn't see anybody put 'em in there. There was twenty of them.

MR. ADKINS: I understand.

THE WITNESS: They had Speno written on them; Speno 1, 2, 3--

MR. ADKINS: And the name of the machine was Speno. What were the name of the other machines you had out there? Did they have names like International Harvester, or whatever?

THE WITNESS: No. The only ballast cleaner that the N & W had was Frank Speno's ballast cleaner.

MR. ADKINS: Okay. So all the machines out there were Speno machines?

THE WITNESS: What do you mean, all the [40] machines?

MR. ADKINS: What I'm saying is, Speno is a brand name of a machine, right? Of a type of a machine.

THE WITNESS: Yes, sir.

MR. ADKINS: Right. And you don't know who owned that machine?

THE WITNESS: Yes.

MR. ADKINS: Did you see the purchase agreement?

THE WITNESS: No. Of the machine?

MR. ADKINS: Yeah.

THE WITNESS: They said, Frank Speno.

MR. ADKINS: I understand they said that, but do you know that of your personal knowledge?

THE WITNESS: No, sir.

MR. ADKINS: Somebody told you that?

THE WITNESS: Yeah.

MR. ADKINS: Do you know of your own personal knowledge who put the masks in the toolbox?

THE WITNESS: The Speno supervisor said that they put them in the shop in Syracuse, New York.

MR. ADKINS: But you don't know who owned the machine, whether the railroad owned it, or whether [41]—

THE WITNESS: Frank Speno owned it.

MR. ADKINS: Well, that's what they told you. Did you see a document or a lease or anything like that?

THE WITNESS: Yeah, when I was foreman, I had to sign one every night.

THE ADKINS: Oh, you signed a form for the machine that went with working out there, right? How many hours it worked, etc?

THE WITNESS: Yes, sir.

MR. ADKINS: But you don't know who owned the machine? You didn't see a title to it or anything like that?

THE WITNESS: It was on the form; Frank Speno Ballast Cleaner, Syracuse, New York. They sold it in '79 to Union Tank Car.

MR. ADKINS: Well, again, Judge, I think this is—I think we're getting into something here. We've established that of his own personal knowledge, he really doesn't know, and I think this is something that is prejudicial; and on this kind of foundation I don't think this should come in.

[42] THE COURT: How many ounces in a quart?

MR. ADKINS: I don't know, Judge.

THE COURT: You don't?

MR. RION: I know. There's thirty-two.

THE COURT: How did you find that out? Somebody told you. I mean, how we learn things in our lifetime is because we're told.

Who told you it was Frank Speno's machine, or that it belonged to the Speno Company?

THE WITNESS: All the superintendents—Every year there might be a different one and he'd stay with you for maybe two or three months, and there'd be another one come, but there was always, they called them Speno superintendents. And they said they was two Speno boys, Frank Speno and Martin Speno owned the company.

MR. RION: Did railroad people tell you it was a Speno?

THE WITNESS: Yeah.

MR. RION: Did your boss man tell you it was a Speno?

THE WITNESS: Yeah. It was all over the side of the machine, S-P-E-N-O, Syracuse, New York.

MR. RION: It's also like if a worker sees [43] Kaylo on the side of a box, of his own personal knowledge, he doesn't know that it came from the Owens-Corning facility, it's a circumstantial—

THE COURT: I'm gonna let him testify. Let's take just two or three minutes ourselves, and we'll bring the jury back in here.

(Whereupon, a brief recess was taken)

BY MR. BOITER:

Q Before we took a break, Mr. Johnson, we were talking about the Speno machine. Would you describe the mask that came with the machine; what it looked like?

A (Indicating) It was a piece of paper that was like that. It had a piece of metal, of aluminum that went across it like a straight bar right through here. It had a rubber band hooked on this side. A rubber band went out of this side. You put that up over your nose like that and mash that metal till it contours with your nose, and pull that rubber band down over the back of your neck. This part here come down over your chin and it was sort of contoured like your chin. But that is about as much protection as you had.

[44] Q Who provided those masks with the Speno machine when they got there in the spring?

A They come with the machine.

Q How do you know they came with the machine?

A Because we had to go get 'em out of the boxes in the boxcar. See the Speno Company brought a boxcar with them and they had every piece that went on that machine in that boxcar so if you broke down, you didn't have to go nowhere, you'd just go to that boxcar and get what you need. They put band aids, Mercurochrome, I call 'em dust masks in one box, and you'd have different parts in another one.

Q Why did you use that mask when you were using the Speno machine?

A Well, it would keep a lot of that dust from, you know, gettin'—it didn't keep it all, but it would help you a lot up until it got dirty.

Q When you operated the Speno machine, how long did it take for one of those masks to get dirty?

A On a real dry day, two hours. In two hours it would look like a black rag.

Q Okay. When the Speno machine came in the [45] spring, how long did the respirators that came, or the masks that came from the Speno Company last during that work season?

A I'd say a box of them, maybe, sometime they'd go maybe five or six weeks. You could use—they'd maybe be, see, about two hundred in a box.

Q As to that period of time, were there anymore Speno masks to use?

A No. You couldn't get 'em, they wouldn't send 'em.

Q Did the railroad supply you with a mask after the ones that came with the machine ran out?

A No, sir.

Q Did you try to get them?

A No, sir.

Q Was it still the same job after the masks ran out?

A I don't understand your question, now.

Q Were you still doing the same type of work after the masks ran out?

A Yes, sir.

Q Was it still as dirty after the masks ran out?

[46] A Yes, sir.

Q Would you have been breathing the dust during the period of time you were working that job?

A Yes, sir.

Q Just so the jury is clear, seasonally, about how many months did you work that job?

A Usually, they put it on around the first of April, and they'd work it till maybe November, if they had a real dry

October, you know, come up into November. They'd go up until the fifteenth of November, if it stayed dry. But if it would rain two or three days, you couldn't run it if it was rainin'. If it got down wet two or three days, they'd cut it off; send it back to the shop.

Q When you were doing this work, how many days a week were you actually working on the machine?

A It all depended on the railroad. I have worked it thirty-nine days in a row, seven days a week. It was several weeks before they'd let us go home.

Q When you were working that period of time on that schedule, at any point in time after the masks from Speno were gone, did the railroad ever provide you with a mask?

[47] A No, sir.

Q And how many years did you work this machine?

A My first summer was in '73, and I think I worked it till—the last summer was in '84, the flood. I'm not sure if it come back to the N & W after that, but I believe that was the last time I was on it, in '84.

Q So from '73 to '84 you never got a mask from the railroad to use on that job?

A No, sir.

Q For the other part of the year, during that period of time, what types of jobs did you do?

A I'd go back to runnin' the backhoe, maybe run a bulldozer, be on a servicing gang, or go back to my proctor gang. I've also run a clamshell.

Q You did that up till 1978?

A The Speno up to '84.

Q '84. Okay. In 1978, did part of you job responsibilities change then?

A Yes, sir.

Q What did you start doing in 1978?

A What now?

[48] Q In addition to the Speno, what did you start doing in '78?

A Burrow crane operator.

Q Explain that word.

A A burrow crane is a machine that pounds rails, they change rails in and out with them, and they are heavy liftin', and haul the material. It has a bucket on it. You can ditch with it, ditch mud with it.

Q How long did you do crane operator work?

A I worked on a crane from say in '78 to '87. I worked on the cranes, the clam shell, the burrow crane, and a backhoe. That's about it. You know, maybe I'd work three months and go back two months on one, you know back and forth.

Q During the period of time that you were a crane operator, do you believe that you were ever exposed to any asbestos dust?

A Yes, sir.

Q Tell us how you have been exposed in doing your work as a crane operator.

A Through the asbestos bands on the crane. They were made out of asbestos.

Q What do you mean by the band on a crane?

[49] A Well, you see, on a crane you got maybe twenty bands or more and they set right beside the operator—a big drum does all your turnin'. You got a loadin' band, you got a holdin' band, you got a swing brake, you got a swing band.

Anything that that crane does once, you got to have two bands for it, to stop it, see. One to make it move and one to stop. So when it comes to the travel part of it you've got four bands on the travel, cause you go forward one way, and back and reverse the other way. You've got two travel on it.

Q Now, how were you exposed to asbestos from these bands?

A Well, the bands would get hot and burn up on the machine, and we was sittin' up in there runnin' it. Red hot.

Q You were sitting directly in the vicinity of where the bands were?

A Well, I was about within three foot of them. But there was a partition, now, that went through the crane, a metal partition. But the band was in that room.

Q Was any other asbestos on the cranes that [50] you used?

A None that I can think of.

Q How long did you work the crane operators job?

A From '78 till '87.

Q And was '87 when you retired?

A Yes, sir.

Q Why did you retire?

A I had a leg injury in November of '87.

Q You hurt your leg and retired in '87?

A Yes, sir.

Q Besides the leg injury, we're gonna talk about the asbestos problems in a minute, what other types of medical problems do you have?

A Now?

Q Yes, sir.

A Do you mean that one over here—what I went through over the last twelve, fourteen years?

Q We're gonna talk about the asbestos in a minute and we've talked about your hurting your leg at work. Do you have any other medical problems? You've got your hearing problem.

A I have my hearing problem and I've had [51] cancer surgery five times in the last fourteen years.

Q What type of cancer surgeries have you had?

A Well, I had a melanoma took off my back. I had skin cancer took out between my eyes, and I had skin cancer took off my neck twice, and I've had it took of my arm once.

Q We're gonna talk a minute about the asbestos exposure. Do you know whether or not the doctors have said you have a lung disease from your exposure to the asbestos?

A Yes, sir.

Q Have you actually ever seen the breathing test or the x-ray results yourself, personally?

A No, sir.

Q Okay. But the doctors have let you know, though, that you do have an asbestos disease?

A Yes, sir. Asbestos and what's that other word; sili—

Q Silicosis.

A Silicosis.

Q Do you have any problem with shortness of breath?

[52] A Yes, sir.

Q When did you first notice yourself developing a problem with shortness of breath?

A Five or six years ago. It come on like my hearing loss, just gradually. It didn't just come up on me over night.

Q Do you know what you were doing; how you sort of first noticed that you were starting to get short of breath?

A Yes, sir. When I first noticed it, I could take my lawnmower—my yard is about as big as this courtroom—I can mow it in twenty minutes. I mean without stopping, just cut it, mow it and put my lawnmower in the garage. It takes me an hour now. I've got to stop.

Q Does the shortness of breath affect you when you take a walk?

A Yes, sir.

Q About how far can you walk before you start feeling like you're short of breath?

A About a block.

Q How long has it been since you've sort of been limited to walking a block?

[53] A I'd say about five years.

Q How far did you use to be able to walk before you got short winded?

A I used to—right after I retired, I'd go the flood wall at Williamson. It was two and a half mile long. I'd walk it twice.

Q About when was that?

A That was in '87 after I retired.

Q Is there anything else sort of in your daily activities, your routine day in and day out, that you do where you notice yourself getting short of breath?

A Yes. I'd help my wife. Before she retired I'd do housework. I mean, it got to me, runnin' the sweeper. That's when you know there is somethin' comin' on, you know, when it starts muddling all of your activities.

Q Do you understand, or believe, that you're at an increased risk for a cancer because of your exposure to asbestos?

A Yes, sir.

Q Do you have any worries, or concerns, or thoughts about that?

[54] A Yes, sir.

Q How do you feel? What goes through your mind?

A I mean I've had five operations, plus the first of February, Dr. Vera Rose, at the Cancer Center at St. Mary's. She diagnosed I had chronic leukemia.

Q Is that currently a treatable problem?

A Yes, sir. She said, you know,—when she first found it my platelets was low, the white blood cells was high. Mine, I think, was 120,000. She told me they was supposed to be between 4800 and 10,000. Well, she put me on a medication, Leukrin, and my first visit—after a month I went back to her my white blood count had come down to 12,000. And she told me, said, "Your platelets ain't gone up none." But she said, "It won't until I get your whites straightened up."

And I went back to her the next visit, another month, she told me my white blood count was ninety-two, and she said that's within range; from 4.8 to 10. She said, "Hopefully, now, your platelets will start going up." And they had went up from, I believe it was from 21,000 to 61,000. I'm supposed to have 120,000 platelets.

[55] Q So she has it under control right now for you?

A Yes, sir.

Q Do you ever worry what might happen if you get another cancer while this is going on?

A No, sir. I just have to—

MR. BOITER: That's all the questions I have for you Mr. Johnson? Would you like to maybe take a short break? Are you okay?

THE COURT: We'll take a break.

(Whereupon, a brief recess was taken)

* * * *

TRIAL TRANSCRIPT
April 20, 1998

Spangler Testimony

* * * *

[29] THE COURT: Okay. Call your next witness, please.

MR. RION: Your Honor, we call Mr. James Spangler.

(Witness Sworn.)

THEREUPON came

JAMES SPANGLER

called as a witness herein, after having been first duly sworn to tell the truth, testified as follows:

DIRECT EXAMINATION

BY MR. RION:

Q Good afternoon.

A Good afternoon.

Q Mr. Spangler, can you hear me okay from here?

A Yes.

Q All right. You've got a little hearing impairment?

A Yes.

Q I'm going to ask you if you have difficulty understanding me, you just tell me and ask me to move up a little bit. But I'm going to move just a little closer so I don't have to holler and if my voice drops or if my accent gets so bad that you can't understand me, just let [30] me know. okay?

A All right, I will.

Q All right. You're Mr. James Spangler; correct?

A That's correct.

Q And spell your last name just for the benefit of the members of our Jury who may be taking notes.

A S-p-a-n-g-l-e-r.

Q And what is your current—

THE COURT: Mr. Rion, push the mike down so we can hear him.

MR. RION: Yes.

BY MR. RION:

Q And what is your age, Mr. Spangler?
A 73.
Q And where do you live?
A Princeton, West Virginia.
Q And how long have you lived-in Princeton, roughly?
A About sixty years.
Q A good time then. Where did you grow up?
A Everywhere. I was born in Wilcoe, West Virginia and my parents were divorced when I was four or five months old. I lived with my grandparents for awhile [31] and my mother remarried and she was killed in a car accident. So from then on until high school years, I just stayed wherever I could other than I was in a mission home a couple of years in Virginia.
Q And that was a mission home for kids who were orphans or just didn't have anybody to raise them?
A Yeah, that's correct.
Q And this was during the years right after the Depression?
A Yes.
Q And the people who were still alive just ran out of money during that time?
A My grandparents lost everything they had in the '32 Depression and so they had no home of their own, and my mother remarried a man. We lived up on the Elk River and I lived with them until she was killed in an automobile accident. And then I just stayed wherever I could until they got me in a mission home for a couple of years. And then at the end of that time, two of my grandmother's sons helped her buy a home in Princeton. So I came to Princeton and started in high school at that time.

Q But when your grandparents got everybody—[32] when everybody in your family got back on their feet, they took you back in and you went back to high school in Princeton?
A That's correct.
Q All right. Now, I believe, Mr. Spangler, you married in the 1940s, did you not?
A 1944.
Q 1944. And you were married over fifty years to your wife; correct?
A 53 years and 7 months, 18 days.
Q And she passed away this past year?
A That's correct.
Q How many children did you have?
A Two.
Q And is one of your daughters in the courtroom with us today?
A Yes, she is.
Q You started with the Virginian Railroad in what year, Mr. Spangler?
A 1942.
Q And Virginian Railroad is now part of what we call the N&W or Norfolk & Western system?
A Yes, that's correct.
Q All right, sir. And your first job with the [33] Virginian was what?
A I was a carman helper or a carman apprentice. I don't know for sure which. I was just an eighteen-year-old boy looking for a job.
Q Right. And how long did you hold this job?
A About three or four months. And we're right in World War II, so I volunteered for the Navy and left for the Navy in January of '43.
Q Okay. So you had this for three or four months. To your knowledge, did you have any asbestos exposure that you can remember during that three or four months?

A No, not at that time.

Q So we'll put no asbestos exposure that you recollect. All right. Then war broke out and you entered which branch of service?

A The Navy.

Q The Navy. And that was in '42?

A '43, January of '43.

Q '43. And how long were you in the Navy?

A Until November the 6th, 1945.

Q November of 1945, U.S. Navy. And you were on board what type of vessel?

A I was in the submarine service.

[34] Q And then the peace from World War II was in 1945 and you came out of the service; correct?

A That's correct.

Q And now during this time, the early years, in the 30s and 40s, did you begin during that time the habit of smoking cigarettes?

A Yes, I did.

Q How old were you when you first started smoking?

A About fifteen or sixteen.

Q Did you back then when you were fifteen or sixteen, when you started smoking, did you realize it was harmful to your health or could cause cancer?

A No, I did not.

Q And how long have you smoked?

A Something over fifty years. I don't know. Fifteen or sixteen to '73, whatever that would be.

Q Have you tried to quit at various times?

A Yes, I have.

Q And I think recently in the last few years you quit about how long?

A. About two years at one time.

Q Now, during this two-year period, that was in the—that was recently in the '90s, wasn't it?

[35] A Yes, it was.

Q During this two-year period when you quit, Mr. Spangler, how often, if at all, did you find yourself thinking about and wanting cigarettes?

A Just daily. I'd be around other people smoking and it was really tough.

Q Would it be fair to say you're just one of these folks that crave cigarettes?

A Yes.

Q Do you have any other serious bad health habits? Are you a heavy drinker?

A No, I don't drink at all.

Q But the smoking is just something you seem to be unable to kick?

A That's right. Yes, sir.

Q Well, have you tried to do anything to limit how much you do smoke?

A Yes, I daily—some days I don't smoke more than maybe ten times. Other days, I might smoke a little more.

Q If you had known back when you were younger that cigarettes could be this hard to quit and is dangerous as we know they are now, would you have ever started smoking?

[36] A No, I wouldn't have.

Q Let's go back when you left the Navy. We're up to 1945. You come back out of the Navy. Now, you moved back to Princeton?

A Yes, I did.

Q All right. So we're back in Princeton, West Virginia. The war is over. It's 1945 and where do you go to work?

A I went to work on the Virginian Railroad.

Q Okay. Again that is now part of the N&W system?

A Yes, that's correct.

Q What was your job title?

A I was technically a sheet metal apprentice, which is—it's a combination trade. They do sheet metal work and pipe work both.

Q Where in Princeton did you work?

A At the back shop, the mechanical back shops right in Princeton actually.

Q And what type of repair work was being done in the Princeton Back Shop at this time?

A Major engine repairs, that just would be the primary shop.

Q When you say "major engine repair," is that [37] when they take the whole locomotive apart and tear it down?

A Yes, clear down to the iron and took trucks out from under it and everything.

Q Tell the members of the Jury what your job was as a member of the—the sheet metal work and pipe craft were put together as one trade?

A Yes.

Q So were you called a sheet metal worker or a pipe fitter or both?

A Well, we were called both. We—technically, on the payroll, we were carried as sheet metal workers. But 90 percent of our work was pipe work.

Q All right. So when—tell us what your duties were in connection with the heavy repair of locomotives in the back shop.

A Well, when the locomotive came in, all the pipe was removed and then another craft took the truck out from under it. The wheels,—

Q Yes, sir.

A —that's what they normally call the trucks. And we moved the jacket and the asbestos. And then the boilermakers and the machinists and various ones took over the repairs of the primary boilers.

Q Now, I think the ladies and gentlemen of the [38] Jury have been shown a photograph and let me—before I do this, Mr. Spangler, is your eyesight a little weak?

A I'm legally blind.

Q You can still walk around a room. You can see us here but you have trouble making things out unless they're real close?

A I sure do.

Q Ladies and gentlemen of the Jury have been shown this photograph which shows a steam locomotive. I want to ask you can—let me see if I can—can you make this out if I bring this up here. (Counsel indicating.)

A Yeah, that's somebody installing asbestos or insulation of some kind on what we call the cap area, I believe.

Q All right.

THE COURT: Of what area?

THE WITNESS: Where the fire box is, these knobs or caps, what they call caps, had bolts in there and then a cap went on it.

BY MR. RION:

Q Did you do this kind of work?

A Put the insulation on, yes, sir.

Q All right. So we talked about that some men were actually involved in putting the insulation on the [39] steam locomotive and taking it off. You would be the—you, as a sheet metal worker or pipe fitter, would actually be involved in doing that work; correct?

A Yes, that's correct.

Q All right. Now, when they brought it in, the asbestos over here was covered with something; am I correct on that?

A Yes. It had a metal jacket on it.

Q Is that how the sheet metal craft comes involved in this process?

A Yes.

Q Because this is covered with a sheet metal jacket?

A That's correct.

Q All right. Now, when the sheet—when you and the other sheet metal workers would come—first of all, you take

the—how did you take the—did the sheet metal come off in one big piece or how do they work?

A No, it was in—in the primary boiler, it was in pieces about 3 feet wide and 8 feet long. Other areas, it was in smaller pieces. But then you had to start at the bottom and take it off and a great deal of dust and so forth fell out on you. And then after you got all of the jacket off, then the asbestos was taken off.

[40] Q Yes, sir. Now, when—was there a wire—once you pulled the jacket off, was there anything holding these pieces of asbestos on the boiler?

A Yes. When it was installed, they would put wire around the boiler and then the asbestos would fasten to the wire with another wire of design that was made to bend over and hold the asbestos. Then in removing that, after the jacket was removed, on top of the boiler and engine, they took a chisel and cut those wires and just allowed asbestos to fall and it made a terrible cloud of dust, you know.

Q Would it just fall and hit the floor?

A Yes. Anybody in the general area would just be covered up.

Q That's what I want to ask you. Now, you're in the sheet metal/pipe fitter craft. While you're doing this work in the Princeton Back Shop, would there be other crafts who weren't working directly on the asbestos who would be in the same area as the sheet metal workers?

A Yes.

Q And when this asbestos comes off and hits the ground and creates—you say it's a cloud of dust. Tell us a little bit about how dusty it was.

A Well, it was—I don't know how to explain [41] it any more than it was an extreme cloud of dust that—don't know how to explain it any more than that.

Q Would it be cloudy enough at times it was, even hard to—like foggy to see through?

A Yes, in that immediate area it would. And, of course, it would dissipate as it spread, you know.

Q Would there be other crafts in that area who would be enveloped in the same dust that you were in?

A Yes.

Q What other crafts would that be?

A Machinists, electricians, boilermakers, carpenters.

Q Now, once the asbestos hit the ground, who cleans it up?

A The laborers generally cleaned it up. They used shovels and brooms and shoveled it up into hoppers and hauled it to a place they store it.

Q Then they used brooms to sweep up dust off of the—

A Yes.

Q When you use a broom to sweep up dust of asbestos already on the floor, how does that affect the dust conditions in the shop?

A Well, it made dust, of course. They were—[42] they swept pretty vigorously sometimes, you know. Then shovel it and then just picking it into a hopper.

Q I think you told us in addition to taking this asbestos off, you'd be involved once they finished working on a locomotive and putting new asbestos back on; is that correct?

A That's correct.

Q I have brought with me, Mr. Spangler, some pieces of—these are non-asbestos material. It is not asbestos. Let me get one. I have here (indicating) some stuff involved from an insulating shop that's asbestos-free. It doesn't have any asbestos in it, so you don't have to worry about that. But I want to ask you if you could—do you remember the photograph I showed you a minute ago?

A Yes.

Q Can you see this from this? (Counsel indicating.)

A Yes.

Q Feel on it a little bit.

A (Witness complies.) What we used wasn't that thick

Q It was thinner?

A Yeah, and it possibly an inch-and-a-half. [43] And it was 6 inches wide and about 3 feet long.

Q Yes, sir. Was the feel of the material similar?

A Yes.

Q Kind of chalky?

A Yes.

Q Like I notice here when I pull this here (indicating), it gets on my fingers.

A Yeah, but it wasn't as solid as this is.

Q It was more crumbly?

A Yes.

Q Now, when you take—when the sheet metal workers take the block material, which you say is a little thinner but maybe a little more crumbly and you go to put it on the locomotive, was there any cutting or shaping you had to do with the material to make it fit the contour of the boiler?

A In some areas there was. Of course, there's pipes and so forth that come directly out of the boiler. You have to cut to fit around that sort of thing. But as far as fitting the contour of the boiler, as big as the radius of the boiler was and no wider than the insulation was, we didn't have cut it for that reason.

Q But you did have to cut this?

[44] A Yes, for connect pipes and set it. Different things that came out of the boilermaker is attached to the boiler.

Q I understand. So if it didn't—as far as the surface wasn't smooth, you didn't have to use this. What did you use to cut this?

A A saw, a hammer, or break it, or anything.

Q Was that a dusty process?

A Yes.

Q Were there days, Mr. Spangler, when you come home from doing this you could just—maybe not when you came home but when you finished doing this kind of work, you could look at your clothes and you would just be covered in white like a snow bunny?

A Yes.

Q And you did this type of work from 1945, beginning for the first time from 1945 until about when?

A Late '49.

Q All right, late '49. Now, Mr. Spangler, I'm going to direct the members of the Jury's attention to the excerpt we have on the AAR documents, 1935. Now, if I'm referring to the date 1935, we're talking about fourteen years before you began employment in the sheet metal/pipe fitting trade; correct?

[45] A Yeah.

Q Now, the 1935 AAR documents talk about in regard to asbestosis and silicosis. On Page 90, I'm going to read to you some—it says, "In the way of prevention, it becomes necessary to educate all concerned." Now, when you were doing this work, were you actually the man putting the asbestos on and tearing it off; did anybody from the railroad educate you about the hazards of asbestos dust?

A No, they did not.

Q I put "yes" or "no" for that?

A No.

Q All right. Number 2 says, "Get rid of the dust." Did they tell you—did they educate you that you needed to rid of this dust?

A No.

Q Number 3 says, "Sprinkle the working area with water." And they're talking about using water to reduce the dust. Did they tell you to do that?

A No.

Q Number 4 is, "Have employees wear inhalers," respirator type things. Did they tell you you should wear an inhaler to prevent—

A No. No, they did not.

Q And, finally, "Have frequent analysis of the [46] dust content of the air at different times during the working hours." Did you see them walking around at frequent intervals doing dust counts to see how much asbestos was in the air?

A No, I did not.

Q Well, it says there frequent. Did you ever see them do this?

A No, I never did.

Q That takes us up until 1949. Oh, we're still—one other thing. Did the Virginian take the old asbestos and grind it up to make cement to be used?

A Yes, they did.

Q And did you, yourself, do that?

A On occasion, I did.

Q How many times would you say you did that?

A Oh, half a dozen times probably because it primarily was some other person, another party's job. But, occasionally, I would fill in and do that.

Q So you would take this old material. What would you put it in to grind it up?

A They had a grinder that had teeth sort of like your fingers that matched together and you put it in and it came out of the other end.

Q Was that dusty?

[47] A Pretty dusty, yes.

Q Compare the dust to when you put the jacket off the steam locomotive and everything dropped and hit the floor. Compare that dust to the dust from the grinding. Which was worse?

A Well, when you took it off the engine, you just didn't run into anything worse than that.

Q Is it a close call or easy call?

A Oh, it's a easy call. The grinder wouldn't put off more than 10 percent of what they did when they dropped it from the-locomotive.

Q Why is that from your experience?

A Well, it was dry and brittle from being on the locomotive for a number of years and then it dropped approximately—the top part would drop approximately 18 feet and then the belly would come under and fall on the engine and there was steel framework that it hit on and broke.

Q Did the railroad ever suggest instead of letting it drop that the workers should hand it down carefully so it doesn't break and create dust?

A No, they didn't.

Q Now, in addition to the work on the steam locomotives during the same period, did you do work [48] repairing pipes?

A Yes, I did.

Q And were the pipes insulated?

A Some of them were.

Q The ones that were insulated, was it with an asbestos material that the substance of it was similar to this?

A Yes.

Q Mr. Spangler, I have a piece again of nonasbestos pipe covering. I'm going to ask you—let me get it. Can you see—

A Yes.

Q —this? (Counsel indicating.)

A Yes.

Q Is it similar to this? (Counsel indicating.)

A Yes.

Q And you take—say, if a pipe is here, you'd take two pieces of this and fit it around a piece of pipe?

A That's correct.

Q. When you did that, did you have to sometimes saw or cut this insulation so it would fit around a pipe?

A Yes, we did.

[49] Q Did that process create dust?

A To a certain degree, yes.

Q Did anybody from the railroad ever tell you should use exhaust ventilation or be in an area where you have some

type of mechanical device to suck the air away when you cut this?

A No, they didn't.

Q Did they warn you this could be hazardous?

A No, they did not.

Q So, on the steam lines, you would be involved in taking this old stuff off of a steam line to be repaired?

A Yes.

MR. BAKER: I would object, Your Honor, I don't believe he said there was any of that on the old steam lines. I think he said some lines had and some lines didn't. He's testifying to the facts and evidence.

BY MR. RION:

Q But if a pipe had it on there and you had to repair it, would you have to take it off?

A Yes, we would.

Q And did that happen?

A Yes, it did.

Q And if it was a line that needed to [50] insulated, if you tore it off, would you have to put new pipe covering back on it?

A Yes, we would.

Q So this takes up until 1949 and I think from '49 until the early 50s you were away from the Virginian Railroad and not working there; is that correct?

A That's correct.

Q And you went back to the Virginian, I believe, in Narrows, Virginia?

A Narrows.

Q Narrows. And when was that?

A It was early in 1951, I believe.

Q 1951. Do you know how to spell Narrows.

A N-a-r-r-o-w-s.

Q And where were you working there?

A At the time, I was with the Virginian Railroad.

Q Okay. So you were in the powerhouse and the powerhouse is where they generate steam to heat the facility?

A No, they made their own electricity.

Q Oh, okay.

A And they had electric locomotives in some areas. That supplied the generating powerhouse for [51] electricity.

Q Did they have boilers that generated heat and power?

A Yes, they did.

Q And were the boilers insulated with boiler insulation similar to what went on the steam locomotives?

A I don't really know. That would have been under boilermaker.

Q All right. So you weren't working on the boiler?

A No, I wasn't.

Q What were you doing instead of making—

A I was a pipe fitter, but my principle job at that particular place was insulating pipes.

Q Okay. So when you say your principle job was insulating pipes, it would be the same type of thing we just talked about?

A No, we didn't use the preformed.

Q Okay. What did you use?

A They used the vats and we used a little power saw and cut it into strips to fit the various radiuses of-pipe. A pipe might be eight inches in diameter. It might be ten inch.

Q Was it asbestos-type insulation you were [52] using?

A Yes, it was.

Q But you had to use what kind of saw?

A A table saw. A little electric table saw.

Q And was that a dusty process?

A Yes, it was.

Q And during that time, did the railroad recommend any type of exhaust insulation to rid the area of dust?

A No, they didn't.

Q Did they give you a respirator to wear when you were doing this type of work and tell you that you needed to wear a respirator to avoid this dust that could hurt you?

A No, they never did.

Q How long were you in Narrows?

A Approximately four or five months.

Q And then where did you go?

A I went back to Princeton.

Q That would be back in the back shop?

A Yes. I worked in the car department thirty days and back in the back shop.

Q Okay. 1951 you're going to have thirty days in the back shop, I mean, in the car department. Do you [53] remember any asbestos exposure in the car department?

A No, sir, I don't.

Q You don't, okay. Then you went to the back shop?

A Yes.

Q And what were your duties there?

A The same things that it was earlier, repairing steam locomotives.

Q As far as asbestos exposure, the same type of thing we have talked about all along?

A Yeah, that's correct.

Q And how long were you there?

A About three or three-and-a-half years. I don't know exactly.

Q Up to about '53 to '54?

A Yeah, about '54 and they began the diesel line.

Q And did you get laid off then?

A Yes, I did.

Q Up to 1954, still were they—during any of this time when you're back on the steam locomotive doing the same type of work,—

A Yes.

Q —were there any warnings or work [54] procedures recommended by the railroad during this period?

A No, there was not.

Q And in 1954, you say you were laid off?

A Yes.

Q And when did you come back?

A I went to—I went to work for the N&W Railroad in Bluefield in 1955.

Q How long did you—1955, N&W. This was in Bluefield?

A Yes.

Q And what did you do there?

A Pipe fitter/sheet metal worker.

Q Did that job involve asbestos exposure?

A Yes, it did.

Q How?

A Well, in pipe insulation like we were talking about, the preformed pipe insulation. And then they had a two-stall shop, they call it a back shop, and they would take the jacket and the insulation off of the area over the fire box and then that would have to be reinsulated and the jacket put back on. What I talked about earlier was like working on the caps, they call it.

Q And how long did you stay doing in Bluefield at the N&W before you were laid off again?

[55] A Well, I was—let's see, I was laid off in '59 when they began to get diesel.

Q So you went from '55 to '59 here doing that work in Bluefield and then laid off in '59 and I believe you were off until when?

A I don't remember exactly. It was about live or six years.

Q 1959 until the mid-60s—

A Yes.

Q —you were off. And then did you come back to the N&W?

A Yes, I did.
Q And that was in what year, the mid-60s?
A I don't know. It was in the mid-60s.
Q Mid-60s, N&W. And you stayed there until when?
A 1980.
Q 1980. And what, still doing sheet metal/pipe work?
A Yes.
Q And did you still have to during this period, were you still involved in repairing steam lines?
A Yes.
Q And did you still during this period have to [56] tear old asbestos insulation off?
A Yes, we did.
Q And did you still have to put new asbestos insulation on?
A Yes, we did.
Q In fact, as late as the mid-1970s, were you still in the employment of the N&W, directed by the N&W to tear asbestos insulation off of old pipes?
A Yes.
Q So as late as the mid-1970s when the N&W had you tearing asbestos off of old pipes, did they then in the mid-70s tell you that asbestos was harmful?
A No, they did not.
Q Did they recommend any kind of protection in the mid-70s?
A No, they did not.
Q Mr. Spangler, when did you first found out from a doctor that you might likely have an asbestos problem?
A '92, 1992.
Q I think, was that when you were in Florida?
A Yes, in Kissimmee, Florida.
Q Tell us what you were doing down there and what happened to you.
[57] A Well, my family and I were going down there on vacation and I became ill and they—I went to the emergency

room at the Humana Hospital and I had pneumonia and I spent that vacation in the hospital.
Q Were—
A And the pulmonary doctors told me there that I had asbestosis.
Q Now, this was where in Florida?
A Kissimmee.
Q Is that down in Disney World?
A Pretty close to Disney World, yes.
Q Yeah. And you were down just with your—who all was down there with you? Your wife—
A My daughter and her husband and my wife and grandchildren.
Q Now, what was—the plan was to see what down there?
A Well, Disney World and various other things that are to be seen. There's Sea World and Disney World. Because we had been to all the places, but just to accompany the children.

MR. RION: Could I see Exhibit 9, please?

BY MR. RION:

Q And but you ended up spending about the [58] whole time in the hospital?
A I spent the whole time in the hospital, yes.
Q I believe that's it right there. This is Exhibit 9. I would like to just show the date here, first of all, the institution Humana Hospital, Kissimmee, Florida. Is that where you were, Humana Hospital in Kissimmee, Florida?
A Yes, it was.
Q And the date, please, 4-13-92; does that coincide pretty much with—
A Yes.
Q —when you were down there? Let me see that a moment. On the Diagnostic Impression, number 1 and 2, if we could focus on that. It says here: "The patient has increasing respiratory distress with a low-grade temperature

and productive cough." Now, this respiratory distress, it means trouble breathing. Were you having that at this time?

A Pardon me?

Q Were you having trouble breathing at this time?

A It goes on to say: "The patient had had heavy dusty smoke—"

MR. BAKER: I'm going to object to this [59] unless we're going to have the doctor here to testify about this so he can explain what this is and what these terms mean and so forth. I don't think that—I mean, the Jury can look at it in evidence, read it or whatever, but for us—without a doctor or somebody to explain here what the terms mean, I don't think that it's appropriate.

MR. RION: I can ask him what happened during this visit.

THE COURT: Sustained.

BY MR. RION:

Q Now, on 2/2, it says: "Chest x-ray is consistent with pulmonary fibrosis. I suspect the patient has asbestos exposure and may well suffer from asbestosis." Is this treatment when they first told you that you likely have a problem from asbestos?

A Yes, that was the first time.

Q And you were in the hospital, about how long was this particular episode?

A I guess in a week.

Q During this week, were you able to perform your breathing on your own or did you require special medical assistance in breathing?

A No, nothing other than they did administer oxygen.

[60] Q So you did—

A No mechanical means or anything like that.

Q You were not put on a ventilator, but you were put on oxygen?

A Right.

Q How was the oxygen administered?

A Through my nose here (indicating).

Q How, long did they do that?

A Well, I recall most of the week. I had a hard time persuading them to release me. My family had to go home and I had trouble persuading them to let me go. But they did release me when my family had to leave.

Q Have you since then, since that hospitalization, have you been hospitalized for pneumonia since then?

A Yes, two other times.

Q And was each one of those about the same length, about a week?

A It was three days to a week, something like that.

Q And did each one of those involve the use of some article of oxygen to keep you breathing?

A Yes.

Q At this time back in or around '92 when you [61] were down in Florida, is this around the time when you first noticed shortness of breath?

A Yes.

Q Mr. Spangler, I want to talk just briefly about how this—just exactly what your shortness of breath is like. Do you own some rental property that you help—you go out and watch and supervise work on, occasionally?

A Yes, I do.

Q Do you have a helper who drives you to the doorsteps of the property?

A Yes, I do.

Q And does he bring a chair inside for you?

A Yes, he does.

Q And do you then sit in that chair and supervise?

A That's correct.

Q Do you—now, I don't want to embarrass you or anything, but do you sometimes find yourself—when your helper brings your chair in and you walk in the door, by the

time you get in and he pulls up—now, he pulls up as close as he can get to the house, down [sic] he not?

A Yeah, he does, right.

Q Do you on occasion, by the time you get [62] inside and get in your chair find that you are somewhat winded?

A Sometimes, yes.

Q What I want to do—let me ask you this, Mr. Spangler, are you a person who likes to complain?

A No, I'm not.

Q Will you do about anything you can to avoid complaining?

A Yes, I will. I grew up in the hard world so I don't like to.

Q Yes, sir. Did I try to tell you last night you were going to have to describe for the Jury what your symptoms were like?

A Yes, you did.

Q And did you tell me you didn't want to do that?

A Yes, I did.

Q All right. Well, here is what I'm going to do to try to not make you complain, but I want you to—don't brag on yourself and try to say that you can do more than you can. All right, fair enough?

A All right.

Q Now, do you go—who gets your mail for you? Do you send somebody out to fetch your mail for you?

[63] A I usually do that.

Q How come?

A Well, it's one of the things I've been doing for years.

Q Do you like to be waited on?

A No, I don't.

Q All right. Now, how far is your mailbox from your front door?

A Just about a 100 feet.

Q About a 100 feet. Are you a pretty good judge of distance?

A Pardon?

Q Are you a pretty good judge of distance?

A Yes, I am.

Q All right. So about a 100 feet. Now how many steps is it to get in and out of your house, how many steps are we talking about?

A One step.

Q All right. Now, I'm not going to make you walk a 100 feet, but I would like for you just to demonstrate for us. Come down and just show us about how—the pace you like to walk. Just show your normal pace.

A (Witness complies.)

Q Now, I got you to walk with me a little bit [64] last night, didn't I?

A Well, this is about it.

Q All right. That's about how you like to walk.

A Yes.

Q You can turn around and walk back now if you want to.

A All right. Thank you.

Q I'm not going to make you walk any more than that. So if you go get your mail and come back, we're talking about walking—you say it was about a—how far, 110 feet, did you say?

A Yeah, as I know it, it's a 110 feet because I've used an extension cord to—

Q All right. So if you go there and back, we're talking about 220 feet; right?

A Right.

Q Now, just by comparison, a quarter of a mile is 440 yards; right?

A I think, yes.

Q If you've run track, or if you have, you know, of course, 440 is a quarter of a mile. And each yard is 3 feet; right?

A Right.

[65] Q So a quarter of a mile is 440 times 3 and I'm just going to say 1200 plus. Fair enough?

A Okay.

Q All right. How long does it take you to walk out 110 up and 110 back to get your mail?

A Well, I've never really timed it, but it was be approximately five or six minutes.

Q Okay. About five minutes. To give us some idea. That's for 220 feet, you're talking about it—if you would have walked that pace for a quarter of a mile just to do the math, it's going to be over four times that distance; correct?

A Yes.

Q So if you would have managed to walk at that pace for a quarter of a mile, we're talking about twenty minutes per quarter; right?

A Yes.

Q Now, when you get back after walking 220 feet at this pace, what do you do?

A I'd probably sit down and rest and open my mail.

Q. Are you breathing hard enough when you do that that I know that I know you can't see other people, but you have other people at home with you sometimes. Were [66] you breathing hard enough where from using your common sense, somebody standing right here could probably hear you breathing?

A Yes, they could.

Q So are you panting after doing that?

A Well, I need you to define panting. I don't understand.

Q Somebody else could hear you breathing from—(counsel indicating) like that.

A Similar to that, yeah.

Q Okay. Is this shortness of breath getting better or worse or staying about the same?

A It's getting worse.

Q Does the fact that it's getting worse cause you some concern?

A Yes, it does.

Q Does your experience in the hospital with this oxygen kind of have some bearing on that?

A Yes. I'm concerned about being on oxygen constantly or being a burden to my children.

Q I promised you I wouldn't make you talk long about your respiratory symptoms because I know you didn't want to so I'm going to quit.

A Okay.

[67] Q Thank you.

MR. BAKER: Can we approach just a second before I begin cross examination?

THE COURT: Uh-huh.

(Counsel approach the bench.)

MR. BAKER: Good afternoon, ladies and gentlemen. What we've agreed on is that—a moment ago Mr. Spangler testified that between 1950 and 1955 he worked approximately three-and-a-half years in the back shop at Princeton. For those of you who have taken notes and remember that, we have agreed that actually during that period of time he only worked a very short period.

MR. RION: For the N&W.

MR. BAKER: For the N&W or for the Virginian.

MR. RION: Right, correct, just for that '50 to '55 time frame. We were off on that and we were all agreeing on it.

JUROR: Do you care if I say something? The Virginian Railroad, wasn't it taken over by the N&W or what?

THE COURT: We'll get to that. You'll be given some information about that folks.

CROSS EXAMINATION

BY MR. BAKER:

[68] Q Good afternoon, Mr. Spangler. We've met before haven't we?

A I believe we have.

Q Okay. You recognize the voice.

A I recognize the voice but—I recognize the voice.

Q Okay, but you can't see—would you like for me to come up closer or can you hear me pretty good?

A No, that's fine. Thank you.

Q Mr. Rion asked you briefly about some or mentioned briefly some of the rental property that you own in Princeton. It's my understanding you have about twenty-three houses; is that correct?

A Yes.

Q And then you're also involved in a corporation that you and your son own which has four rental houses; the corporation owns three or four?

A Yes, that's correct.

Q And you do still help actively manage those even though you don't do any of the repair work yourself; is that right?

A That's right.

Q Now, you talked a minute ago about your period of work for the Virginian between 1945 and late '49 [69] and, I believe, you characterized all that work as being in the back shop. Do you remember that?

A Yes.

Q Do you remember when we had your deposition you told me that about sixteen months of the period from '45 to late '49 you actually worked as a sheet metal worker in the sheet metal worker's building?

A Yes.

Q So, then actually then between late '45 and whenever you were furloughed in '49, sixteen months of that time was

actually in a separate building, the sheet metal worker's building; correct?

A Not entirely. The sheet metal workers made the jacket and then helped install it and, I mean, the people that worked on the chimneys, we were all sheet metal workers.

Q Okay.

A So, I didn't spend that entire sixteen months in that particular area.

Q But you did work about sixteen months, though, when you would have been building new jackets or building pipe in the sheet metal worker's building?

A Yes, that's correct.

Q Okay. You weren't in the back shops?

[70] A That's right.

Q Okay. You talked a moment ago and we looked at this piece of insulation and you said that you installed some of this insulation during the time that you worked as a pipe fit—or sheet metal worker; is that right?

A Yes.

Q Now, when we took your deposition, I asked you about the different types of lines that were insulated. Do you remember that?

A Yes.

Q And do you remember or was your answer at that time and would it still be today that the only lines that were insulated on the actual steam locomotives were the oil lines?

A Yeah, but I didn't assume we were talking about steam locomotives with this preformed stuff.

Q Okay. But—no, no, I understand you're not saying that preformed insulation was used on the steam locomotive. Let me ask you this again and see if you—

MR. RION: I'm not—Your Honor, I'm not sure if he was finishing his answer. He may or may not have been. Can you answer, Mr. Spangler?

THE WITNESS: Yes, I did tell him that the oil lines had insulation on them. And at that time, I forgot [71] there is a steam line that comes from the top of the engine to the water injector that's also wrapped with wrapping.

BY MR. BAKER:

Q Okay.

A But that's all of the wrapping on an engine then.

Q Okay.

A As well as I can remember.

Q When you worked with this preformed insulation, if you didn't have to cut a piece of it, that wasn't a dusty job was it, installing and removing that?

A It would depend on what you call dusty. There would be some dust, not in comparison to the back shop. But there would be some dust.

Q You wouldn't say that there was a great deal of dust created whenever you had to do pipe work with preformed insulation, would you?

A Not a great deal, no.

Q Now, my understanding of steam lines is that steam flowed through those lines and that sometimes the pressure would cause a break; is that right?

A That's right.

Q And if you had a break in the line, it would cause—the water would run out the bottom of the jacket [72] that was over the steam line; is that right?

A On occasion it would.

Q Okay. And the steam lines that I'm talking about now, just to make sure we're on the same page, are the steam lines that ran through the yards?

A Yes.

Q Okay. If you had a break in a steam line and you had to replace a piece of that insulation, would the insulation that you were replacing generally be wet when you took it off?

A Well, right in the immediate area of the leak it would be. But very often you would have to take off more, I mean you couldn't—in other words, the way they looked at it, if there was a hole in the pipe there, the whole thing was about that thin. But the immediate area might be wet and sometimes it wasn't wet.

Q Okay. Now during the time, I guess it probably would have been about 1946 to about 1966, your work with the railroad was somewhat sporadic and you did residential plumbing in your spare time and the times you were laid off; is that right?

A Yes, that's right.

Q You talked about the work you did at Bluefield. Bluefield differed from Princeton in that they [73] didn't have a heavy repair facility at Bluefield, did they?

A No, they didn't.

Q They didn't do the complete stripping down of the locomotives?

A No, they did not.

Q Now, the only type of insulation you did on the locomotives at Bluefield was the caps that you talked about?

A That's correct.

Q Between 1955 and 1959 while—you were at Bluefield during that period; is that right?

A Yes.

Q Now, I asked you about the steam lines on the locomotives a minute ago but I didn't confirm. Were the water lines or I believe you told me in your deposition that neither the water lines nor the air lines on the steam locomotives were insulated, were they?

A Usually they weren't.

Q Okay. I think you were furloughed from Bluefield from about 1959 to about 1966. Does that sound about right to you?

A Yes, something like that. I'm not sure, something like that.

Q If those were the dates you gave me in your [74] deposition, would you have any—

A That's about it, yes.

Q Okay. Because I know a minute ago you—the best you—

A I'm positive I was furloughed in '59. I'm just not sure when I went back.

Q It could have been '65; it could have been '67?

A That's right, that's correct.

Q Okay. They didn't actually do any locomotive repair at Bluefield once you returned to work there in 1966 to 1980, did they?

A No, they didn't.

Q And all that work from 1966 on involved diesel locomotives; is that right?

A Yes, it was.

Q I believe you told me earlier that the pipes on the diesels were not insulated with anything were they?

A No, they weren't.

Q In talking about working with the pipe, and I guess that would be yard and shop pipe at Bluefield, would you still agree with me that about 75 percent of the work you did from 1966 to 1980 at Bluefield involved work on the diesels while 25 percent of your work was work in [75] the yard or shops?

A Yes.

Q And in doing the pipe work at Bluefield from 1966 to 1980, that all involved preformed insulation, didn't it?

A Yes, it did.

Q And my understanding that you hurt your back in 1979 or 1980 and that's why you stopped working for the railroad then; is that right?

A That' s correct .

Q You smoked Lucky Strike brand cigarettes, Camel brand cigarettes, and Kool brand cigarettes. Were any of those filtered?

A No, they were not.

Q I believe you've told me before either in your deposition or maybe something written that you started about 1938 and you stopped in 1990?

A Something like that.

Q And then you started back in 1992?

A I believe I stopped in '92.

Q Okay.

A And started eighteen months, two years later.

Q Okay. Were you still smoking when you went [76] to the hospital in Kissimmee, Florida or had you stopped by that time?

A Well, I hadn't smoked for about a week.

Q Okay. Did the doctor down there that you saw counsel you that you shouldn't take back up smoking again?

A The only thing he said—I told him that I had quit and he said well you can only qualify yourself as a quitter in a week.

Q It turned out he was pretty well right, wasn't he?

A That's correct.

Q You've seen the warning labels that appear on the cigarette packages and first started appearing back in the 1960s, haven't you?

A Yeah. I don't remember when they first appeared.

Q But you remember seeing it for quite a few years, don't you?

A Yes.

Q And some of your treating doctors have told you to stop smoking, haven't they?

A Yes, they have.

Q But you still smoke today, don't you?

[77] A Yes, I do.

Q Would it be fair to say that it's just a personal decision you've made that you—that the benefit to you from smoking outweighs the risk?

A I don't know whether you could say the benefit outweighs the risk or not. The addiction, I guess, outweighs the risk.

Q You enjoy the cigarette smoking enough that you keep doing it even though you know it's harmful?

A I suppose so.

MR. BAKER: Okay. I don't have any further questions for you Mr. Spangler. Thank you.

THE WITNESS: Thank you.

MR. RION: One quick follow-up.

REDIRECT EXAMINATION

BY MR. RION:

Q Mr. Spangler, when you and I were talking about insulation on pipes, we were talking about insulation in the shop not on the locomotive; is that correct?

A That is correct.

MR. RION: Okay. Thank you.

THE COURT: Okay. Thank you, sir. You can step down.

THE WITNESS: Thank you.

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TRIAL TRANSCRIPT
April 21, 1998

Weir Testimony

* * * *

[31] into evidence, went in and recommended things that the AAR had been talking about with respect to moderating, I guess, exposure, and so forth, is that a fair statement?

A Indeed they made that statement, yes.

Q And you've looked at those documents?

A Yes.

Q So what do they say about his whole issue? Explain to this jury what those documents do or do not do with respect to this idea, the scientific state of the art in the time period of which things are happening?

A Well, when you read all of the documents, I've had presented to me, from the initiation on through to as long as we had them, there was a good story to tell, and the story was that they didn't feel that they had a problem on their railroad, but—

Q How do you know that?

A Only by the words that were written in the documents. No other knowledge.

MR. RION: Judge, if he wants to point the place that it's put forth in the documents—

THE COURT: hat's a fair objection.

MR. RION: But for him to set there and [32] tell us what he thinks Alton Railroad was thinking—

THE COURT: That's the question.

MR. TURNER: Have you read the documents?

THE WITNESS: I have read the documents.

MR. RION: (Inaudible)

MR. TURNER: Well, that's cross examination. I'm asking him to testify about his knowledge.

MR. RION: ___ the best evidence the documents—

THE COURT: I'm gonna permit him to testify to whatever specific content he recalls in these documents that supports his conclusion.

MR. TURNER: Thank you.

EXAMINATION CONT.

BY MR. TURNER:

Q Based on what you've reviewed in those documents, was there a separate representation made in those same documents that there was illness, asbestosis on the Alton Railroad?

A No. No, in those records there was no reference that they had an asbestos health problem in that railroad.

[33] Q Is there any scientific rationale to justify a railroad in West Virginia, I'm thinking about our case here, the N & W, so forth—whether or not the exposures or lack of exposures that were here were similar or different to what Alton Railroad was perhaps discussing and dealing with in Illinois?

A Well, they weren't seeing disease in Illinois by the documents that have been made available; by the letters that were written. And you weren't seeing—you weren't seeing in your railroad here—you weren't seeing any evidence of disease, so in both cases you were not seeing evidence of disease.

Q Let me ask you while I'm talking about documents—textbooks, medical texts or scientific texts, and they existed—there were textbooks, of course, written in the '30s and '40s, and so forth, is that correct?

A Yes.

Q What would medical textbooks, scientific texts saying about these issues that we're talking about, with respect to asbestosis, railroad workers, so forth?

A Well, one in particular written by Dr. [34] Ramsey, 1939—it was written in 1938, but became public in 1939. In the title of his book was *Diseases of Silicosis and Asbestosis*. And there is not reference anywhere in that book as to railroad exposures. That was the main purpose of that book.

Q What else over time?

A And ____ there was a *Manual of Pharmacology* which they discussed all of the effects of chemicals for medical people, by Sollmann, I believe. Toren Sollmann, I believe. That stated, for the training of physicians that in Dr. Sollmann's opinion, the asbestos was a minor problem in comparison to the silicon problem, and that most likely the asbestos, any disease associated with asbestos would be because of the release of the silica from the silicate material that it is. And he's wrong, but that's the sort of thing that was being promoted.

Q Was he negligent for saying that?

A No, he was not. He's been highly regarded over the years for his judgment.

Q So why not just do whatever the Alton Railroad did? How come everybody didn't do that? Why is that scientifically reasonable based on current [35] evidence at that time?

A Well, I don't know the reasons, but I do know that there was good rationale for why should we spend money in one location for doing something that's required in another location, but not pertinent, or does not change the health in a worker. And there is no evidence anywhere that any of the events or situations that the Alton people put into place changed the health of one worker within the Alton Railroad.

Q Isn't that just putting a price on worker health? When you start saying things about money and so forth?

A I don't think so. I think it's just being practical. It's running the railroad, in this case, in a manner that you think is appropriate. You don't just go out and willy nilly spend money for solving problems. It would be like His Honor asking me to do a carbon monoxide analysis in this room. It wouldn't be proper practice to do that in this room and it would be a foolish waste of his resources.

Q But you could do one?

A I could do one, yes.

Q Was it negligent, in your opinion, for [36] the N & W not to do the things that the Alton Railroad had done in the given time periods with which we're concerned in this case?

A Not based on what was known and appreciated about the hazards in that work place or in that class of work places at that time, no, sir.

Q Let me go back just for a minute to the chart we have up here and ask you just in a way of commentary, did the initial reference in this public health bulletin 241, to this TLV, did that in any way reduce the consumption of asbestos in American Society?

A There is certainly no evidence for it based on the use chart throughout the 20th century, no, sir.

Q These Alton documents were from what year?

A They were also from 1936, 7 and 8. I don't think they went into '39, but in that era.

Q Nothing down around here somewhere? (indicating)

A Yes, sir.

Q What happened with respect to consumption of asbestos in America after these Alton documents? [37] What, did it go up, did it go down?

A Well, it went up remarkably as the pattern showing there, with the advent of World War II and the use of asbestos multiplied remarkably since then.

Q Did the Alton documents or the Driessen study—what is that?

A The Driessen study is that bulletin 241.

Q Okay. Were either of these documents working together some kind of alarm clock that woke up the fields of toxicology or industrial hygiene to radically change the way in which asbestos was considered and recommended levels were set and so forth?

A Well, certainly that was the number—the number that Driessen came up with, it was the number that eventually in the mid 1940s became the accepted number by the American Conference of Governmental Industrial Hygienists that stayed without variance until 1968.

Q So from this point, thirty years?

A Yes.

Q The level I think you testified—it was not necessarily sufficient to protect against [38] asbestosis?

A That's correct.

Q You're familiar with Lee and Selikoff in 1979?

A I am.

Q Is that the same Selikoff, or relation at least to the Selikoff study of the mid to late 1960s?

A It's exactly the same gentleman.

Q First of all Lee and Selikoff, was it a textbook, was it a study, what was it?

A Well, they published the same report in a couple of different places. One of them was in something called *Environmental Research*, the journal. And what it was a comment, a commentary about the state of affairs, looking back on the issue of asbestos hazard.

Q Looking back in time from 1979?

A Yes.

Q As of that year 1979, I think you've described that there was an emerging pattern of illness in some populations of the railroad industry?

A That's correct.

Q What did Lee and Selikoff say, then, [39] about looking back from that point after the pattern emerged?

A I don't have the exact quote but they summarized, encapsulate in the last paragraph of their article that it's amazing that when you look back on it, all of the elements that could have been put in place were in fact there, but that we didn't have sufficient—he was using "we" as I understand it, meaning medical science and he was really the fore front of investigation of asbestos research, we didn't have the proper judgment to be able to make the assessment that we currently have and are able to make in 1979.

Q Was Lee and Selikoff and the rest of science negligent before 1979 for being ill-equipped for not being able to make those judgments?

A Not one bit.

Q Let me just ask you some questions about your opinions in this case with respect to this case and I have a few questions to ask you about the plaintiffs, individually.

Should the railroad have considered its employees to have been in an elevated risk of injury from asbestos exposure in the 1930s?

[40] A There was no evidence for that so the answer would be no.

Q 1940s?

A No evidence for it and, in fact, there was accumulating evidence that would support just the opposite. So the answer would be no.

Q How about the 1950s?

A No.

Q '60s?

A No and certainly because they were then as it were, getting out of the application of asbestos, so no, at that point they were not thinking.

Q When should they have thought that?

A There is no time, based on the then current use, understanding on the first hand that their use of asbestos, for the most part, had stopped in the mid-50s, and they then only

had residual for a few years and then almost nothing, down to the present. Just like any other industry, there is no basis ever to consider that they ever exposed their current employees above those levels that have been considered to be recommended, and therefore, safe in that particular work place.

[41] Q Did that knowledge only come after they stopped, by about twenty years, the use of asbestos products?

A Indeed that's what all the data support, yes.

Q Let me just ask you about some of the specific work procedures and alleged exposures that plaintiffs have testified to in this case and perhaps in their sworn deposition testimony. I'm going to ask you some questions.

There is an allegation that there is asbestos exposure from riding in the locomotive cab of a steam engine and that in that particular job, the unit is going, the air is coming through and exposes crew to asbestos particles. Are you familiar with that allegation?

A Yes.

Q Have you done anything to make yourself aware as a scientist about whether or not there are excessive exposures from that type of activity?

A Yes.

Q What have you done?

A Well, I've done two things. I had [42] occasion at one time to have opportunity to have an articulated locomotive from the Norfolk & Western at my disposal and I instrumented that locomotive with a variety of scientific instruments to evaluate whether or not materials coming from under the metal skin could get back into the engineers face.

Now, we didn't have asbestos on it at the time I tested it, but we had to use a different technique and it was called a tracer gas technique. What we did was we put a gas out there at a point that we would be presumed to release asbestos and then measure its concentration back in the engineers breathing zone. And at no time would the asbestos that would

have been there have had opportunity to gain entry into the cab area in a meaningful manner.

I think the highest ratio is something like a hundred fifty thousand or two hundred fifty thousand to one chance of one particle getting back there if it had been released.

Q That substitute measure that you've described, is that acceptable in your discipline as a way to try to characterize asbestos exposure?

A It's a very acceptable procedure within [43] the field of Toxicology Industrial Hygiene.

Q Who paid you to do that?

A I was compensated for doing that by the Norfolk and Southern Railroad.

Q And a part of their interest about this kind of alleged exposure?

A That's correct.

Q All right. You said there were two things.

A Yes. There is another study that I undertook more recently of an older locomotive because I had not done this particular procedure on the first series. And that was to ride an older locomotive—it happened to be one that was a turn of the century locomotive operated out of Grapevine, Texas. It's a coal fired locomotive converted to oil, so it's no longer burning coal. But I rode on that an excursion route for six and a half hours and measured the pattern of air flow through the cab and the theory behind my interest was that the furnace, the fire box has to gather its air supply from somewhere. There is a tremendous volume of air for every pound of fuel in one of these.

[44] And anybody that's ever seen a coal fired or even a log fire in a stove recognizes there is a tremendous rush of air through the door. All of this air basically comes from either directly in the center of the locomotive at the fire box level, or from underneath where the major damper is. And so, I over that six hour run measured the direction and velocity of air

using what is known as a hot wire anemometer to evaluate the probability of air going from the center back to the location where the engineer and firemen would reside. And at all times when I was able to test there was movement of air from the windows area where these gentlemen sat toward the center and down, or in some cases up, because there was also a vent. But at no time was there the reverse flow from the head of the boiler where there was or would have been in other years asbestos, toward these people.

So that if there would have been have been dust, it would have been moving toward and down.

Q Away from the men in the respirable area?

A That's exactly correct.

Q And who compensated you for that?

A No one.

[45] Q You did that on your own?

A Because of my interest in the issue, yes, sir.

Q All right, in your experience is there any basis for over exposure of asbestos given the ____ of riding on a steam engine?

A None whatsoever, sir.

Q There is allegation of asbestos from vibrations either in a locomotive or in a facility. Are you familiar with that type of allegation?

A Yes, I am.

Q Is there any basis in your experience for over exposure to asbestos from that?

A You just said the words over exposure.

Q Right. Over exposure.

A Certainly there may be exposures above background, but physiological meaningful exposures, exposures above those that even today would be considered important? No.

Q About this asbestos from sweeping floors in the 40s and 50s?

A There are several complicating factors there. Certainly there would have been dust on the [46] floor. Certainly there would have been dust on the floor. Certainly some of that dust, if it is as described, containing asbestos would have contained asbestos, but anyone who has ever been in a backshop or been in a roundhouse would know that floors often contain enormous amount of grease, oil, dirt and grime. There is tremendous absorption capacity of asbestos and even these other materials, these magnesium materials for oil. Asbestos fibers have been used for many, many years as an absorbant for greases and oils. And so those material would have had a tendency to coagulate, actually, with those other materials.

We don't know the levels, but certainly there would be some times when there would be clouds of dust. No question about it.

Q How about sawing asbestos, can that cause over exposure?

A It certainly can cause elevated levels for the duration of that sawing activity, no question about it.

Q How about applying and removing asbestos lagging in the backshop type of facility?

A There would be some dust during the [47] addition; there will be much more during removal. There is no question that during removal, especially, there will be elevated levels.

Q That is the time when in average, when we talk about TLV's and PEL's come into play, when you can have these incidents, as you've described of potential over exposure?

A Right. For a particular individual?

Q Yeah, for a particular person.

A Well, depending on how near he was to that particular activity, because certainly proximity played a big role. Concentration falls off very quickly as you can see from the dust that you raised there a few moments ago. You didn't

walk ten feet and yet there was no dust. And so, proximity constitutes a big thing there.

Certainly those things that are proximate to it and remain proximate to it have a greater opportunity for exposure than those from distance from it.

Q How about asbestos from pipes in a facility?

A There is little opportunity for that [48] material to be released. First and foremost the overwhelming majority of that, as we indicated earlier, was wrapped either in a canvas medium or in a metal medium. And often it was wrapped in a what's called a rooting cell, something to maintain the integrity of that over the course of time. And there was not—there is no evidence to support any other locations.

Testing, for instance, down in other shops parallel to railroad shop, there is no evidence to support elevated levels.

Q We've heard testimony from Mr. Butler about nonrailroad exposures to asbestos—for his 33 years of nonrailroad exposure to asbestos in other facilities, power plants and a variety of places?

You have knowledge about the potential for over exposure in places other than the railroad, is that correct?

A Well, yes, of course depending on what he might be doing.

Q Is there something about over exposure in the nonrailroad worker?

A Certainly, by his description he talks about working in a variety of locations. He talks about [49] schools and churches and the Celanese Corporation, and he talks about also being a contract employee working during construction and renovation of a variety power plants.

One of those power plants I have some significant information about and that's the John Amos power plant over here a ways. And in fact, that location for many years was

very heavily—how to use the word—there was a great deal of asbestos containing insulations on the various high temperature, high pressure streamlines within that location. And based on my review of the descriptions that he gave in his deposition he had ample opportunity for exposure—I don't know, I didn't take measurements, of course, but based on his description of his activities and his proximity to other people, he had ample opportunity.

Q How about transfer shed with packaged asbestos products? Is there a basis for over exposure there?

A Well, let's understand what a transfer shed is. It's an open building, each side has a track on it, it is built somewhere up above the surface so that the level will be level with the floor of the car. [50] So it's a long structure, a roofed structure with concrete, perhaps concrete base and you can enter a car on either side. So it's an open area first and foremost.

And we're talking about product now because if in fact a product just happens to be an asbestos containing product it doesn't necessarily mean it's gonna release fibers unless for some reason or another we broke it; and then there might be some fibers released. But you can't expect the great percentage of any product would be confined or they wouldn't ship it that way very long.

Q How about asbestos wicks and switch heaters; the basis for over exposure?

A Actually, that's pretty silly because the exposures there would be minimal. You're talking about a small woven material that over the course of most of the time is wetted with kerosene or something equivalent to it so that it wouldn't be available to release fibers into the atmosphere. And even under those circumstances where it might, it would be such a minimal thing as to not be measurable almost.

Q How about asbestos bands on Burrow [51] Cranes? Are you familiar with that allegation in this case?

A Yes, I am.

Q What about basis for over exposure there?

A Well, that's one area where I have investigated personally. I've had opportunity in other circumstances to actually test the bands on crane brakes, on a crawler track crane, for another company's interest. In fact we totally—we asked the operator of that crane to totally destroy, by operation, the brakes by running it and squealing the brakes until they were totally worn out and measuring the air borne concentrations at all times and then ask the mechanic to replace those brakes.

Q What did you determine?

A At no time were the asbestos fiber levels at his breathing zone ever elevated above the then acceptable levels of asbestos fibers for a work place.

Q Which you've tested, as described to the jury, and compared to what you've read in the depositions where that work activity was described, was it the same type of floor plan, same type of relation between the operator and the band, and so forth?

[52] A As it was there under written description, I wasn't here in the courtroom to hear it—

Q I know. But the sworn testimony that you've read would it appear generally, comparative to what you've described?

A Indeed it was, sir.

Q There are some allegations in this case about exposures to dust other than asbestos. I want to ask you, first of all, do you have knowledge through the credential that we've talked about, with respect to an understanding of exposures to sand and/or coal dust?

A Yes, sir.

Q You've read the allegations and sworn testimony with respect to those kinds of dust in this case, is that a fair statement?

A Yes, sir.

Q With respect to the allegation that exposure to locomotive sand from engine braking, I'm thinking of a yard setting—

A Yes, sir.

Q Are you familiar with that?

A Yes, sir.

[53] Q Any reasonable basis for over exposure?

A My presumption is that the gentleman ____ concerned is on the ground and the—

Q That's my understanding.

A —the engine is moving.

Q That's my understanding.

A Well, if the engine is moving, how can he be near it? I don't see how they can stay close to it for a very long period of time. And there is just not a great deal of opportunity to generate much very fine dust from very slow stops.

Q Well, very briefly for the jury, we've been going a long time so I want to get to the end. They need to understand, but they need to understand how did speed and sand dust—what's the relationship between them? And how is sand even used on trains?

A Well, sand in either the diesel bays or in the steam bays was used, as you can understand, the steel wheels on steel track and sometimes they need extra friction to initiate movement or to stop. And so they had containers that culminate into a funnel that culminated back into a tube that right above the track would release sand at the request of the engineer. And [54] that would be in front of each of the drive wheels or behind the drive wheels, depending on whether they're going frontwards or backwards.

And so, when he sensed that there would be slippage, he would put a little sand on the track. And if in fact, there was a great deal of energy of spinning the wheels, then you could break up that sand into very small particle and perhaps get

them small enough so that they would be acceptable for the respiratory tract. Generally, that dust is too large so it would never get into the respiratory cycle.

Q So, if you're going slower it doesn't crush it as fine?

A That's correct.

Q With respect to what you've understood from the sworn testimony about coal dust exposure in these cases, is there any evidence or anything for basis for assuming over exposure?

A No basis upon everything that I've reviewed in regard to this release of coal dust, although there are some very large—from a physiological perspective very large particles involved. There are very few that are fine enough to gain entry [55] into the respiratory tract.

Q Let me ask you some of your opinions about the allegations made by some of the plaintiffs and then I'll be done.

With respect to Freeman Ayers?

A Yes, sir.

Q You are familiar with his work history and exposure allegations from the materials you've been provided and what you've been told about this evidence, is that correct?

A Generally, I think, yes.

Q To a reasonable degree of scientific certainty did he have exposures on the railroad in excess of then existing threshold limit values?

A On a timely and average basis, no. There were a few times early in his career, '47 to '50, when he may have been in or near stripping, or somehow disposing of insulation. But when you consider one day a week for a very short interval of time, given everything else that he did, no, there was no reasonable expectation of him having excessive or physiological meaningful exposure to asbestos fibers.

Q Carl Butler. You're familiar to his work [56] history and exposure allegations in this case?

A I am.

Q To a reasonable degree of scientific certainty, did he have exposures on the railroad in excess of then existing threshold limit values?

A My understanding is that at some point he did some work in what might be called backshop or a shop where they were doing some repair and he had opportunity occasionally to be near asbestos containing insulation that was being removed. But his job would have required him to be in and away, in and away from this from some portion of the renovation of that unit.

So, when you look at it overall, using professional judgment, I wasn't there and I can only use what he said and what I understand, based on what he said, there is no reason to believe that that exposure would have caused him to have excessive levels of asbestos exposure. And certainly, after he got away from the railroad, it would not have been a railroad related asbestos exposure.

Q Doyle Johnson. You are familiar with his work history and exposure allegations in this case?

A Yes.

[57] Q Let me ask you to a reasonable degree of scientific certainty did he have exposures on the railroad in excess of then existing threshold limit values?

A There is no basis anywhere in my review of his work to support that he had reason to have physiologically meaningful levels of asbestos dust to produce disease based on his work on the railroad.

For the most part he worked maintenance of weigh outdoors, doing outdoor things, generally speaking. But while he had other disease processes there is no basis to conclude that he had an asbestos related—he would have had ____ to have an asbestos related disease based on the descriptions of his exposures that were provided in the record.

Q John Shirley. Are you familiar with his work history and exposure allegations?

A Yes, sir.

Q I may have failed to ask you about this, but there is an allegation he makes about asbestos walls and ceilings?

A That's indeed correct. He had a small cubicle, 10' by 12', or whatever.

[58] Q To a reasonable degree of scientific certainty or probability did he have exposures on the railroad in excess of the threshold limit values?

A There is no basis that on a time weighted average basis, that under time weighted average consideration that his exposure should have ever exceeded the concurrent, or the then responsible threshold limit values and he should not have had excessive exposures based on what was appreciated at that time.

Q James Spangler. You are familiar with his work history and exposure allegations?

A I am, sir.

Q To a reasonable degree of scientific certainty or probability did he have any exposures on the railroad in excess of any existing threshold limit values?

A Well, certainly there was an interval of time from '45 to '50 when he claims to have done some stripping of locomotives and work, and even when he was working as a pipefitter from time to time in '51 and '52, when for short intervals of time he might have had some levels in excess of what we would recommended at [59] this point in history. And then he did work '52 to '55 in the powerhouse where he claims to have removed and installed asbestos containing materials there.

And then in the Bluefield shops he apparently did some running repairs '55 to '59. So, over the course of time he would have had levels in excess of those that would be considered proper now, but certainly there is no basis to conclude from the levels acceptable at that time that he would

have been exposed to levels in excess of those that would have been acceptable.

Q Finally, that leaves Clifford Vance. Are you familiar with his work history and exposure allegations?

A Indeed I am.

Q To a reasonable degree of scientific probability did he have exposures on the railroad in excess of known existing threshold limit values?

A And my answer is, as I understand it, that early in his career that he was a laborer at the roundhouse in, how do you say it, Iaeger?

Q Iaeger.

A Iaeger. Okay. That was a fairly [60] operation as I recall from reading, there were only two stalls in that roundhouse, and he swept up residue from floors in that area, among other duties. And then from '45 to '60 and then from '67 to '81, or thereabout he acted as a hostler, or a person that moved trains about the yard at both Iaeger and Bluefield. Then he claims that, as I understand it, he moved units in and out of one or another of the buildings from time to time.

Based on everything that I have reviewed, there is no support that he would have had excessive levels of exposure, especially excessive levels in comparison to the then acceptable concentrations for the work place.

Q For all of these plaintiffs taken together, just to summarize what you've said, based on then existing threshold limit values, did any of them have over exposure on a time weighted average?

A Based on the concurrent available, acceptable evels, no.

MR. TURNER: Your Honor, if I could have a moment.

That's all I have at this time

THE COURT: We'll take a ten minute recess.

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TRIAL TRANSCRIPT
April 22, 1998

Weir Testimony

* * * *

[30] Okay. Thank you. Quick question about sand blasting. Would you agree that sand blasting, if you don't have any type of hood, or protection, can cause some immediate irritation?

A Yes, sir, it sure can.

Q I mean, it can cause—as opposed to asbestos, if you don't know it's dangerous, other than a little bit of aggravation, asbestos is something that can be worked around, in most environments with a lot of immediate irritation?

A Well, most of it is skin impact, for the most part.

Q As compared to sand blasting, is it something that's likely to cause some pretty immediate aggravation in terms of stuff hitting your face, that type of thing?

A Yes, sir.

Q All right. Let's talk, just very briefly about the individual cases and then you and I will be through.

A All right.

Q Mr. Shirley. Do you agree, he's testified here and I think in the deposition material [31] that you have, he talked about loading and unloading asbestos products?

A Yes. He talked about it in a transfer shed.

Q Do you remember and agree that the safety procedures the Alton railroad recommended in the 30s said that employees loading and unloading asbestos products should be protected?

A I don't remember that.

Q Could we just, briefly, take a look at this and put that on the screen. This is the January 18, 1937. Number one said, "Respirators should be furnished by the company and they should be worn at all times by employees handling asbestos. Attention is called to some of the specific instances where

respirators are required and when one is loading and unloading shipments of asbestos".

A Indeed, you're right.

Q Thank you. We talked a little bit, yesterday, about, I believe, the sand exposure that Mr. Shirley had when a locomotive would have stopped right beside him. He's testified that he'd be standing there and a locomotive is coming his way, and he's checking [32] the car and so he's writing down numbers as they come by—trying to—and I think he indicated that he wouldn't get any dust if the locomotive kept moving fast—

A No, he wouldn't get very much.

Q Is it your understanding, that what he's talking about is the locomotive going past him?

A That's what he said in his deposition.

Q He said, here—

A A deposition is sworn testimony. He swore to tell the truth, here, sir.

Q Well, he's sworn to tell the truth here, too.

A I have to go on what I have.

Q What he's talking about here, in this courtroom, was that sometimes a locomotive would stop right beside him when they poured the sand down into the (inaudible) system. That would be a different kind of exposure, if that's correct?

A Yes. Those are very large particles. It has no physiological effect.

Q But it would be very different from what you discussed here?

[33] A Yes, but it wouldn't imply a physiological response.

Q Well, the N & W had a claim for that type of exposure in the 50s; didn't they?

A I don't know.

Q The Virginian Railroad had a claim, do you recall, for a worker who was—I think it was the guy who was driving the locomotive said the sand came back up in there and

harmed him during the—was it during the 50s? Have you seen that claim?

A No, sir. I have no idea of that.

Q Okay. It's in evidence.

MR. BAKER: The question should be clarified, then, as to whether it was the same exposure about sand dumping beside somebody, or into the cab.

MR. RION: Oh, it was definitely into the cab, in the claim.

THE WITNESS: It was a totally different circumstance.

BY MR. RION:

Q You're saying the dust, though, the dust that came up would be large particles and wouldn't hurt anybody in the cab, or outside?

[34] A As he is running the sand into the hopper, that is correct. That material is very, very large and it wouldn't be effective as a friction material if it were too small.

Q That would be true of inside the cab or outside the cab?

A No, we're talking about material, that's correct.

Q I mean, if that's your opinion, your opinion would be the same for both the guy in the cab, or a guy right outside the cab?

A My opinion would be based on the facts as I understood them, and I don't understand these you are referring back to—

Q Well, it's in evidence that September 14, 1941—number 14. But, maybe I'm confused, but if you're saying the particles are too big to hurt anybody, they are gonna be too big inside or outside the cab; am I missing something?

A Sir, you're trying to put two separate elements that occurred in 1941, and whenever this gentleman makes his claim, separated by different circumstances, totally. I don't know those [35] circumstances. What you report to me was different from what I read in sworn testimony during depo-

sition that I took for the truth, and you're trying to tell me now that he said something different besides that.

Q Is the sworn testimony where you claim that he says that the locomotive did not stop beside him?

A He said it was stopping beside him and he was exposed—and it would be dusty for a few minutes. That's the way he said it, "they would be dusty for a few minutes".

Q Well, that's when the locomotive stopped.

A When it was stopping beside him.

Q Well, okay, then maybe we agree. I thought you said on direct that the locomotive was gonna pass him and not stop; didn't you?

A Well, the whole point of putting sand down is during stopping.

Q Right. Well, are you saying in his deposition he said the locomotive never stopped beside him?

A No, I didn't say that.

Q But then you say on direct exam when they [36] were asking you the question, he wouldn't get any exposure because the locomotive never stopped beside him?

A No, I never said that. You are again—

Q I misunderstood you. I thought that's what you said.

A I don't think so, sir.

Q You didn't say it?

A I think you're distorting it.

Q Mr. Johnson talked about, I think we can remember, that he looked at one of these photographs and was asked about working around steam locomotives and they asked him if was it as big as maybe as this picture or another one and he said he worked around what he called a 2100 and said that was bigger than some of the pictures we've been showing. I think everybody's notes would reflect that. That's what I'm—Do you know what a 2100 is?

A I don't know by number what the 2100 is.

Q And from what I read in Mr. Johnson's deposition he simply did not discuss steam locomotives in his deposition; right?

A I didn't find much of it.

[37] Q Did they ever ask him about that?

A I think they asked him if he had or if he was claiming any other exposure and he did not bring it up and I took him at his word when he said he didn't have any other exposure, sir.

Q Well, do you think if he said he worked in this courtroom that he worked around steam locomotives bigger than a 2100 that that's something that he's fabricating?

A No, I think he didn't tell the full story on his deposition, that's all.

Q And he wasn't specifically asked if he worked around steam locomotives?

A No, but he was asked for his exposure. "What other claims of exposure do you have, sir?"

Q He was never asked if he worked around steam locomotives?

A No, but he was asked, "What other areas of exposures do you have?"

Q Can you tell me what exposure he might have had when he remodeled the roundhouse and he took part in tearing down the roundhouse?

A That was an interesting thing because [38] they said it took four years to get that wooden floor outside of that house in Williamson. That seems like an extraordinary thing to take four years to take a floor out of a roundhouse.

Q Do you think—

A A wooden floor.

Q Do you think this is something Mr. Johnson's wrong about?

A No, it just seems like an extraordinary interval of time and I can't believe anyone's working period would take the floor out of a roundhouse, if indeed, the extensive time of

four years, any one interval of work exposure would not have produced significant exposure because of the spread out nature of the opportunity for exposure.

Q Do you know exactly how he was exposed?

A No, my understanding of the reading of it was that he was using a mechanical device to extract those timbers. So, it would have been a mechanical device.

Q He talked also about operating a Speno machine. Do you know anything about Speno machines?

A I understand that Speno is one [39] manufacturer of a variety of machines, but just the understanding that I have is that it is a ballast cleaner. Generally, ballast cleaner machines are used in yards. Perhaps it could have been used in other locations, to get debris like a foreign material that might be associated with a ballast, out and away from it.

But generally, it would have been used in the yard where there is a great deal more opportunity for this to be deposited.

Q Do you know anything about whether the Speno Company furnishes respirators with their machines?

A I have no idea.

Q Well, Mr. Johnson testified they did, but that they didn't last for so long and that after the respirator ran out the railroad never furnished respirators to the men doing the work? Do you have any opinion one way or the other about that?

A No.

Q Okay. Would you agree that Mr. Ayers, probably at sometime, worked around asbestos processes where there was some visible dust created from steam locomotives?

[40] A Yes, sir, during '47 to '50, three or four times a month he worked in the area where there would have been stripping and mixing and installing and disposing of insulation.

Q And Mr. Vance, when he worked with mixing dry asbestos with water, at some time some of that would have created some visible dust in the air?

A It doesn't make a great deal of sense that he would have had too much of this because as I understand the Iaeger, they only had two stalls and it wasn't a very big operation; it couldn't have been a very big operation.

Q But would you still agree that mixing dry asbestos with water will create some dust until it's wet?

A Yes, sir, no question.

Q And he also had some exposure while cleaning up asbestos?

A That's what he said.

Q And, although some of the particles—obviously, if the floor is greasy may stick to the floor?

A Yes, sir.

[41] Q If you use a broom in cleaning up dry asbestos there is going to be some dust created and I think you've said that?

A No question.

Q Now Mr. Butler had a lot of asbestos exposure outside the railroad?

A Thirty-three years.

Q And he had, according to his testimony, three months of exposure on the railroad. Does that sound reasonably accurate to you?

A Yes. The understanding I have is two or three months, yes.

Q And he worked for the railroad for how many years?

A I don't remember.

Q A lot.

A He worked in and out and around, but he only claimed three months of exposure.

Q He worked for several years—

A Yes, he did.

Q And yet he's been honest enough—

MR. ADKINS: The record reflects that he worked twenty-three months.

[42] BY MR. RION:

Q Well, he worked for two years but he said that he only had two or three months of exposure, and that sounds like a reasonable claim, doesn't it?

A I don't know what's reasonable. I'm sure—

Q Well, it doesn't sound like an exaggeration if he worked there two years and said it's two or three months of exposure.

A I don't know.

Q All right. And he had some exposure with the railroad to visible amounts of airborne dust that would have included some asbestos?

A That's what he stated.

Q And you're not in a position to say that the railroad exposure failed to contribute even slightly to whatever problem somebody might determine he has?

A I don't—I have no basis to conclude that such exposure should produce any effect.

Q Well, you're not a medical doctor?

A No, but I'm a research scientist working in the physiology of disease.

Q Well, the question that we're gonna have [43] here is not whether it caused an effect itself, it's whether—I'm gonna ask you to assume that whether their exposure at the railroad contributed, even slightly, to a disease process. Now, first of all, you're not even qualified medically to answer that question, are you?

MR. ADKINS: Well, then why are we wasting our time in asking it if he's not qualified to answer it?

MR. RION: I want to clarify that he's not stating the railroad's exposure failed to contribute to his—and I think you agree with me you are not qualified to state one way or

the other whether that exposure contributed even slightly to whatever disease someone else may determine Mr. Butler might have.

A You're absolutely wrong, sir. I'm a medical scientist, I work in pulmonary disease work, I've spent my entire career working in inhalation toxicology trying to develop the mechanism of destruction of a variety of material, including particulate material.

The literature is replete that the minimal exposures that he would have gotten earlier in his [44] career would have all dissipated because, if you look at the (inaudible) reports, he is replete with the fact that there would be no residual from that many years, thereafter.

The dates are all there, they are very clear, there is no confounding of them, they are as close to absolute as you can get.

Q Now, if you look at—many authors believe the older exposures are more important, don't they?

A Why, if they reach a threshold, that's correct.

Q You've testified about this before, haven't you?

A Testified about what? What page were you referring to, sir?

Q And you testified about the model?

A I don't think so, but perhaps if you have the data we can talk about it. I don't recall.

Q Isn't there a model of asbestos disease that says the older exposure, the more important?

A It can reach a threshold, that's true. [45] But there is no basis to conclude that he's ever reached a threshold. That's the whole nature of it, sir.

Q Just so we're clear, there is a model of contributing causation for asbestos diseases that says the older exposures are more important?

A You're doing the testifying—

Q Is that correct?

A I don't have those data in front of me. If you do, bring them.

Q Do you know who Dr. Gall is?

A Yes.

Q And you know who Julian ____ is?

A Yes.

Q Do you know whether they have developed a model for attributing causation in asbestos disease that emphasize the overexposure? I'm asking you, do you know one way or another?

A If they do, or if they don't, we ought to have it in front of us if we're gonna talk about it.

THE COURT: You can answer that question.

THE WITNESS: I don't remember enough about it to talk about it at this point.

BY MR. RION:

[46] Q All I'm asking—do you remember generally, if they have developed a model for attributing causation in asbestos disease?

A I know that they wrote many things. Without the original papers here, I don't want to discuss it further because I feel that I might misrepresent it.

Q Do you remember whether the model stated that the older exposures are more important?

A I don't remember the facts of that, no, sir.

Q Have you ever testified in a case that the older exposures are more important in attributing causation?

A I don't know, sir. You're the one who has all my testimony.

Q You're the one who's been there. I'm just asking you.

A I don't think so.

Q Now, Mr. Spangler, we talked about yesterday a little bit. Do you recall that?

A I recall he was mentioned, yes, sir.

Q Now, their steam lines—steam boilers, [47] and powerhouses and lines carrying, piping systems from boilers and powerhouses have been in the railroad shops in the 60s and 70s?

A Yes, sir.

Q And many of those boilers and powerhouses and steam lines had to be insulated with something?

A They probably already were by that time.

Q With asbestos?

A Yes, sir.

Q And there were workers who sometimes had to repair those steam lines; correct?

A Yes.

Q And Mr. Spangler was one of those workers?

A That's the understanding that he gives, yeah.

Q And it's your understanding, is it not, that throughout the 1970s the N & W had—forget the 50s and 60s, throughout the 70s had no program for controlling asbestos with regard to workers who had to repair asbestos steam lines.

A They didn't have a general overall program, that's correct.

[48] Q And that was even after the passage of OSHA, which had federally mandated requirements?

A At that time they controlled the levels of exposure, not from there—to deal with it. It was later that they did that.

MR. RION: That's all we have.

REDIRECT EXAMINATION

BY MR. BAKER:

Q Dr. Weir, by my count we're over five hours, so I know that we're all ready to move on to other things. But just a couple of points I want to make, or ask you about.

I'm not sure that I understand where we left off or where we ended up with this idea about what five million particles

per cubic meant. It was your testimony yesterday about that being the TLV set by the ACGIH. The jury will recall from their own exhibits what we were talking about.

Dr. Garrett Skeepers, in testimony to this jury by videotape—what did Dr. Skeepers say in 1964 about what five million particles per cubic foot—don't read all of that—just, as you recall, what was that? Was it total dust, or was it asbestos dust?

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TRIAL TRANSCRIPT
April 22, 1998

Renn Testimony

* * * *

[89] that you've done. I'd like to move on if we could—I think you have a model. I'd like for you to explain to the jury, using the model, how the lungs work, and the pulmonary function of the lungs.

Your Honor, may the members of the jury move down, if they wish?

THE COURT: They may. If they wish.

THE WITNESS: (Indicating) The lungs are actually an organ to take, or let's say extract oxygen from the air and move it into the bloodstream, where the bloodstream can then take it, much like a trolley car line or streetcar line, railroad line, through the tubes—I guess it would be best to say subways, through the tubes, the blood vessels, and carry it to whatever organs need the oxygen in order to do their work.

And, of course, the organs that do the most work, organ system that does the most work is the muscles. They support us, keep us moving and allow us to do whatever we want to do. So they use the most oxygen. But. the heart, which has to beat all the time, is a muscle, and it needs oxygen. And if it doesn't get oxygen, we have a heart attack. It's very simple. So all the lungs are is to actually bring in air, move that [90] air through a place where the oxygen can get into the bloodstream. And it does that by this muscle, which is the diaphragm, which separates the chest from all the other organs, stomach, liver, and all the intestines down below, in the abdomen.

And whenever we take in a deep breath, this muscle moves down and pushes down the organs that you have below. What that does is create a vacuum, or absence of air in the windpipe, which is this little striped device here (indicating), little

grayish-blue, white blue and white stripped device here, the windpipe which goes down through your neck. And then the pressure of the air pushes it into your lungs. This is why we breathe, or how we can breathe, because the barometric pressure pushes the air into your lungs. For instance, when you take a straw and you suck a liquid out of a glass, water, Coke, whatever, what you're really doing is you're sucking the air out of a straw, and then the pressure pushes the liquid up through the straw. You don't actually suck the liquid up, you just take the air away from the straw, and then, the pressure, the barometric pressure pushes it up. This is why when you see the pictures of the space—the men [91] who are traveling in space, or go to the space station, and if they put a liquid out there, it just floats around. It's not gonna do anything.

They also have to have pressure in that cabin in order to push air into their lungs because there is no pressure in space and the higher you go up, the less pressure there is and the more difficult it is to breathe, so we can't breathe in space without pressurized suits.

And my first introduction to that concept was actually in the Navy, at the School of Aerospace Medicine because of the pilots that go up above 12,000 feet then you have to have pressurized breathing.

The air goes in (indicating), it goes through these tubes, the bronchial tubes, it goes out into both lungs, and if you look at the bronchial tube, and this is just a very small representation.

But what happens is, it's sort of like an inverted tree. If you think of a trachea or a windpipe as being the trunk of the tree, and you actually turn this upside down, then what you have is a tree with branching. It branches and branches, and rebranches until it gets out to the very tiniest little branches. [92] And that's exactly what happens in the lungs, in the respiratory system.

And then it gets out to the little teeny tiny air spaces which are represented by this pink. It's like a sponge, like a little kitchen sponge, not the sea sponge with the big holes in it. The sea sponges with the big holes in it are sort of like a person with emphysema. Those are the big holes that you see in a person's lungs with emphysema. But in a kitchen sponge there are some little tiny holes, that's somewhat like the lung which has all the little teeny tiny holes in it.

Now, in this you see some grayish larger areas, grayish-blue, some creamlike areas and some areas which are pink, but larger. And what those are, are areas where the blood vessels, the artery and the vein, and the bronchial tube have been cut across. So where you see these (indicating), this could represent the pulmonary artery which carries the blood from the right side of the heart, out into the lungs, to pick up oxygen, and then the pulmonary vein which carries the oxygen back to the left side of the heart so the heart can pump it; pump the blood and oxygen out to the rest [93] of the body.

And so, when you cut the lung, this way, when you slice across it, you're actually slicing across these tubes, because they run out through the lung tissue.

Well, what is the reason for this set-up in the lungs so that we can breathe, and the ultimate purpose in breathing is just to get oxygen to where it needs to go. That's the whole bottom line of breathing.

And the purpose of the respiratory system, the way it's set-up, anatomically, or the reason the anatomy is the way it is, is because you have to get to a place where the oxygen will get into the bloodstream very quickly, very quickly. The way the heart pumps, and the way that the anatomy is, it is set-up so that there's only three quarters of a second for oxygen to get from the lungs into the bloodstream; and so it requires a very efficient mechanism.

Now, the air spaces that are like this sponge, the kitchen sponge that I've talked about—if we take one of those air spaces—I guess I can use this board. If we take just one air space and represent it as just one little open air space, where air would go [94] in and carry oxygen into that space.

Q Is that an alveoli?

A Yes. That would be called an alveolus. And if we have one blood vessel that surrounds it, what we really have is two very thin areas, little tissue-like areas, or cells. And actually, if we looked at this under the microscope, there would be little thin cells that represented both sides of this, but they're only one cell, one small cell apart. You have to see it under a microscope in order to know that.

In three quarters of a second the oxygen has to go across here and the waste from your metabolism, or whatever, has to go in here to then be breathed out and gotten rid of, pour carbon dioxide back into the air for plants to use, so that they can actually give us back oxygen again.

And I liken this alveolus to the leaf of the tree. That's when all the respiration occurs in a tree, and so, since we've likened the lung here to an inverted tree, the alveolus would be the same of the tree, or the leaf of the tree, where respiration really occurs with the transfer of the oxygen and the carbon dioxide. And it's just the opposite in the plant world.

[95] Q In looking at this portion of the model you've been talking about, you've said that these multicolor areas, the blues and the grays represent blood vessels?

A Blood vessels and bronchial tubes. Actually, it's not shown in this model because this model is not detailed enough to show this, but there is another, yet another system that feeds the bronchial tube. In addition to it receiving the pulmonary artery and the pulmonary vein, it also receives what's called bronchial arteries, and the bronchial arteries keep the bronchial tubes alive and they stretch out as far as

almost the end of a bronchial tube, but not quite. In other words, this is one of the few areas of the body that has a double blood supply, so that it's more difficult for it to die if something happens with its blood supply in one of those areas.

Q What happens if you have a complete blockage of one of the arteries that are entering?

A If you have a complete block, the bronchial tube will stay alive down to the areas where you start to have the alveoli, and where you have the alveoli is fed by the bronchial arteries. Excuse me, [96] it's the other way around. The bronchial arteries will keep it alive until you get down to where the alveoli are, and then, after that, it's depending upon the circulation from the pulmonary artery.

If the pulmonary artery is blocked, then it will die, that part of the lung will die after the bronchial arteries die. So, it's the far part of the lung that dies.

Q It would be in the lower portion of the lung?

A Well, no, it's to the outside. It could occur anywhere to the outside of the lung, you know, to the far side.

Q What kinds of things cause a blockage of the pulmonary artery?

A Well, these are known as pulmonary emboli, or pulmonary—sometimes it's known as pulmonary infarction if there is actually death of the lung tissue. And that means that the lung tissue, the infarction part died, just like a myocardial infarction, when part of the heart muscle dies. And what causes that is inactivity.

For instance, we have to be extremely [97] careful in the hospital. If we put somebody in the hospital, we actually have to anticoagulate them, use other methods to keep blood clots from forming. Most often they form down in the legs.

Orthopedic surgeons are plagued with this because they cast people's broken legs, and when they cast the broken leg,

the person can't move it and the heart that pumps the blood throughout arteries to all our organs is what pumps the blood through our arterial system, but the veins that bring the blood back to the heart, they have no heart to pump back to this heart that's in our chest. So the heart is really the movement of the muscle, but it's the walking about, the squeezing of the veins by the muscle that surrounds them, that actually pumps the blood back up through the veins.

The arteries that the blood is pumped into by this heart have no valves in them, but in the veins that are in your leg, they have valves that have flaps this way (indicating) so that when you take a step, blood is pumped up here, but it can't go back because of this valve. When you take another step, blood is pumped up here, but it can't go back because of [98] this valve, and the same thing here. But it can't go back because of this valve; and so on, until it gets completely back into the heart. In those veins, if there is inactivity, then the blood doesn't move, and when the blood doesn't move, it'll clot; and when it clots, eventually, when you do start to move, or even before you start to move, clots form what's called a tail. And if that breaks off then it will travel up through the right side of the heart, and then it has nowhere else to go except a straight shot into the lungs. And the lungs are like a sieve, or a kitchen colander and they catch those clots because they're too big, the clots are too big to pass through the lungs. And so, they catch those clots and that causes a lot of things, it causes pain, difficult breathing. It causes, most often, death of the lung tissue.

Q After we've talked about how the lung works, and its function, in a layman's term, is the lung an air pump to the body?

A Yes.

Q It's a pump to get air from the outside into the bloodstream?

A Yes.

[99] Q How do you measure how well a person's lungs work?

A Well, that's done by a number of tests. There are, basically, three tests that are used. There is a test to measure how much air comes into the lungs and how much air goes out and how quickly it goes out, and this is basically referred to as spirometry. And then there is a test where we can measure in different ways, the total amount of air that's in your lungs because spirometry will only measure the amount that a person can breathe out, or breathe in. But the lungs don't collapse like a balloon every time we breathe out, they stay stuck up against the chest wall. So even though you completely breathe out and pull your chest as tight as you can to collapse it, you still can't collapse your lungs. They still are stuck up there a little bit and there is still air in there.

Q So, is the remaining air the residual volume?

A That remaining air is called the residual volume, or abbreviated RV. And in that way we can measure the total lung capacity which is abbreviated TLC. And when we measure the total lung capacity, that [100] is the gold standard for determining whether or not there is a restriction to breathing, or a restrictive ventilatory impairment.

The third test is the test of diffusion, and diffusion is really what we're talking about here; diffusion of oxygen into the bloodstream. And that is a test we can do to indirectly measure that. There is also a test we can do to directly measure that.

Q Do you have a short video that shows the jury members what it's like for someone to give a breathing test, or a pulmonary function test?

A Yes.

(Whereupon, a video tape demonstration was shown.)

THE COURT: Do you want me to turn the lights down?

MR. BAKER: Yes. If you would, please.

BY MR. BAKER:

Q Dr. Renn, where was this video made?

A At my office. This person on the right (indicating) is one of my pulmonary specialists.

Now, I want to show you what you're going to see here. What you're going to see next is him [101] performing the test, the spirometry test. And then it will be repeated and then you'll see the way the different types of graphs and tracings are formed. He will be exactly the same, he will be doing exactly the same when you are just watching him perform the test, and what sort of breathing is required for the breathing test itself.

Just before this my daughter and my son-in-law had a complaint as to who was gonna be the videographer, and who was gonna be the subject in front of the camera; and you can see who won.

Now, if you look at the—there are two different types of graph tracings that are formed from the same breath, but this one is a measurement of volume and this is time. This one is different. This one is a measure of volume on this axis and this is a measure of flow; time is not really involved here. Now, you can put a timed tracing on here, but—this is volume and this is also flow. So, you actually have both of them because they help you with interpreting the different tests, and it tells you slightly different things, but the same thing about the breathing. Now, as you heard him say, breathe in, breathe out and that forms this [102] little up and down "W" shaped thing here. It forms this little circle here, and when he took in a deep breath, comes back here to the maximum volume. Same thing here, to the maximum volume, or the total lung capacity that he had. And then when he breathed out, he breathed all the way out, same thing and then this is the big deep breath in, and the big deep breath which should come back pretty close to where he was before. And

this is the forced vital capacity, or FVC. From this there are a lot of numbers taken. You've perhaps thought about the FEV1, which is the forced expiratory volume in one second. That's really taken from here, by looking at the time, seeing where one second is, and then what volume this is from that particular thing. Forced vital capacity is from here to here. This vertical line is in the computerized software for the American Thoracic Society guidelines for valid tests. It tells you that they breathe out long enough to meet those criteria for a valid test, or a good test. If you don't do the test well, it won't be accurate, and when you have a garbage test, you make garbage decisions. So you need good tests to make good decisions.

And this just shows you the same thing, except [103] instead of being inverted it's put upright, because that's the way it appears on most of the printouts that come out on the printer itself, instead of that inverted position.

Q You have to have three trials that are within a certain percentage of each other to get accurate results; is that right?

A That's correct. Well, actually you need three trials, but by the American Thoracic Society standards, you go up to eight trials in order to try to get those three.

Q So you have to have three that are within ten percent of each other on certain tests?

A Well, those are the old criteria, now it's within 200 milliliters.

Q But you can do as many as eight different trials to get three that are within the guidelines.

A That's right, but you don't go beyond right, because otherwise you wear the person out.

Q You touched briefly a moment ago—Doctor, you've shown us how the lung works and you've shown us how you test how well the lung is working. This is a pulmonary function test result from Mr. [104] Butler. Would you explain to the jury what the most important of these tests measures

and how it measures it, and what you can tell from these individual measures?

A Computers are wonderful devices. They can spit out more numbers than you and I could ever look at in a lifetime, and so there are a lot of numbers here and they mean something, but they don't mean all that much.

The American Thoracic Society in 1991 published an official statement on interpretation of pulmonary function testing, and in that statement, there was the criteria set up for how to interpret pulmonary function tests, basically only the spirometry was interpreted. And what you are really looking for first is this, and this is the ratio, the FEV1/FVC ratio, which just means that you take the FEV1 and divide it by the forced vital capacity.

Q Doctor, what is the FEV1?

A That is the forced expiratory volume in one second. And the FVC is the forced vital capacity which we just looked at on the video.

If this number, and actually you multiply [105] this number by a hundred to get percent. Whatever the result is you multiply by a hundred; that equals a percent.

This percent varies according to the age of the person, and it depends upon what predicted values you're using as to what percent is normal, and so forth. There must be eight or ten or even more different sets of predicted values in the United States. Throughout the world there is even more. So it varies according to the age of the person.

The percent then, this would be the predicted for that person, based upon their age, their sex, their height, etc. And then you have a lower limit of normal for them. Not everybody is 74%. You have tall people, poor people, etc., and you have people that—it varies. It's sort of like a curve of people.

If this number that comes from the person is normal or above normal, then what you do is you say that the test is likely normal. In other words, there is obstruction. You also look at, if it is normal, or near normal. Then next, is this test consistent with any restriction? Because that's all a pulmonary function test does. It doesn't make a diagnosis.

[106] It will tell you if there is obstruction or a restriction to breathing. And if this normal or above normal, then you look to the FVC and see whether or not it is below the lower limit of normal. And if it is you have a restrictive ventilatory defect. And so we look here; (indicating) it's normal. It's above the lower limit of normal. We look at it and see that it is 3.69, which is above the lower limit of normal of 2.79, so we do not have a restrictive ventilatory defect.

Q Doctor, when you say a restrictive, versus an obstructive ventilatory defect, will you explain that to the jury, what's meant by a restrictive versus obstructive defect?

A Yes. In the time versus volume curve, that we just looked at on the video, a restrictive defect will look like this. A person will take in a deep breath, blast it out, and it will look normal, but it will be reduced in size. In other words, this volume will be reduced; FVC is down. But if you look at the flow volume loop, it will look normal, but it will be very small. It will not be the normal size that you will expect.

If you have an obstructive defect, then [107] when the person breathes out, they just keep on breathing out. They don't come up to a nice flat place. And in the flow volume loop, it'll come up and drop off and then taper out and then come back.

Q In simple terms, does having a restricted disease mean that you can't get air into your lungs, while obstructive disease means that you can get it in, but you just have trouble getting it out?

A That's correct.

Q Are there any other tests, that you look at in making a determination of whether or not you have restrictive or obstructive impairment?

A Yes. The gold standard test for determining whether there is any restrictive disease, is to determine lung volume study, due to lung volumes. This can be done by different methods.

But what you're really looking for is that amount of air that stays in the lungs when you breathe out completely, called the residual volume, or RV. And then you know what the air is that you can breathe out when you have taken in the deepest breath and then breathe it all out. That's the FVC, or vital capacity, and you take the vital capacity and add it to [108] the RV and that will equal the total lung capacity.

And so the total lung capacity is the gold standard for determining whether or not there is a restrictive defect, and that was also stated in the American Thoracic Society 1991 statement.

Q Doctor, when you look at these values, and you have a predicted value, and a best value, and I notice a percent of predicted—I'm looking at the FVC. It's 94%. That means that his best was 94% of predicted; is that right?

A Yes.

Q Is that within what you consider a normal range?

A Yes.

Q What is a normal range from predicted? Your predicted is 3.91. How do you judge what's normal?

A Well, there are a number of different prediction equations that are used all throughout the world, and it's just what's been determined by different doctors. There is Morris and Gardner, there's Crapo and Morris, there's Knutson, there's Corey, there are all sorts of predictive standards that are used. And it depends upon each laboratory as to what each clinical [109] laboratory decides that they are going to use.

Several years ago, a survey was taken by one of the—well, it was the American College of Chest Physicians and was published in the journal, Chest. That survey lists a whole host of different institutions that use—who do pulmonary function testing. When I'm talking about institutions, they are mainly academic, or teaching institutions, teaching medical students.

And they asked them what they use and the way that it turned out was that they used prediction equations that came with the software that came with the computer that came with their pulmonary function test machine. So they didn't pick one, they just took whatever the company gave them that sold them the machine to begin with, which is not a good way to pick your prediction equations. It is not the recommended way.

These—for instance--in Mr. Butler, is sixty-six years old. In all the prediction equations that we've had throughout the United States, Knutson, Crapo & Morris, and so forth, they have made an assumption, which is really a misassumption, and this misassumption was that older people—everything [110] deteriorates with age. We all accept that. Everything goes with age.

And so, the older people they assumed that would deteriorate, their lung function would deteriorate at the same rate of this younger age group. And they took an age group of 25-65, tested them and found out that their lung function went down, let's say this rate or it's called the linear rate. But there is a national health survey study that's being done throughout the United States, testing a lot of things: nutrition, lung function testing, cholesterol, heart health, etc.

And so we have a lot of lung function information, now, on people who are older, because Crapo and Morris, and Gardner and Knutson, and all those people, really only tested a small number of people. They had very few people—they had very few people who were over the age of 65, so they

really didn't know whether their lung function went down after the age of 65 at the same, rate, the same linear rate.

And what was found is that it didn't. It actually deteriorated a little bit faster, and that was published by a person participating, well, him and other [111] people, a person named Enwright, and some other authors, they published what happens after age 54. And so, they published those standards. They also published the lower limit of normal for these in that age group, and so we apply those to everyone who is 65 or older because they are more accurate than anything else that you could give us.

The other thing about Enwright and group, is that their study was done on thousands of people, whereas Crapo and Morris, and Knutson, and so forth, theirs were done on a few hundred people. So we have a much better idea after the age of 65 than those literally thousands of people who were studied.

Q Do you have anything else you would like to add regarding what each of those tests mean?

A No.

Q We talked about the predicted normals a moment ago and how you had deduced the set that you would use. Did you do any testing, or was there any recommendation that you do any testing that the predicted normals that you decided to use in your office were consistent with the population of people that you were testing?

[112] A Yes.

Q What brought about that investigation and that test?

A Well, there were several articles that appeared in the scientific literature of actually one written by Dr. Crapo, himself, where the American Thoracic Society took up the question. And what was recommended is that each laboratory that was gonna do testing, studied fifteen people of both sexes, fifteen of male sex and fifteen of female sex, and that they span all generations that you might be testing in your

laboratory; and that these should be people who were not overweight, who were life long nonsmokers, who had not been occupationally exposed to something from which they might develop a respiratory problem and that they had no respiratory disease, or history of respiratory disease, and so we actually did that.

We tested almost fifty people and at the same time that I was doing the test, a colleague of mine, Dr. Lapp, at the West Virginia University was also doing the test. And so, together, we tested nearly a hundred people to derive the prediction equations, or get as close to the prediction equations that would best [113] fit the population that we test in the area up around Morgantown.

Q Would the predicted values that best fit the population tested in Morgantown carry over to the people you have tested in this case?

A Yes. Because what we're talking about is not a restricted area of maybe ten miles, we're talking about a very large area of hundreds of miles, that it would apply to.

For instance, the testing that Knutson—on the Knutson standards, that were done in Arizona, Tucson, Arizona. The testing that Crapo did was done in Salt Lake City, Utah. Vastly different areas and altitudes. The testing that Marrs did, I believe was done up in Minnesota. Some of the tests for the prediction equations have been done over in Italy.

Q But you have no reason to believe that the predicted values that you use wouldn't be applicable to someone from southern West Virginia?

A No.

Q Another test that was performed as part of your evaluation is a single breath diffusing capacity for carbon monoxide; is that correct?

[114] A Yes.

Q Is there also a predicted value for that test?

A Yes.

Q How did you arrive at the predicted value to use for single breath diffusing capacity?

A Well, it was the same way. We tested the—we not only did spirometry on all these people, we also did diffusing capacity studies on them and arrived at the prediction equations in that way.

Q We have seen some results of diffusing capacity tests that appeared to be below the normal standards, but when corrected for alveolar volume, they corrected for normal. Is that a procedure, or test that you do as part of your examination?

A Yes.

Q Why is it important to correct for alveolar volume?

A It's important to correct because if you have a loss of lung for some reason, since you're comparing this against normal predicteds, you're comparing this against people who have had no loss of lung. So if you have no loss of lung tissue, it's not [115] there to say, let's say, get in the game of being tested. And because it's not there, the test will appear to show that there is a decrease in diffusion.

And so you have to correct it, or you have to know how much lung is there. And the best way that I can make an analogy to that is, if you've got two football teams that are playing each other and they've got no spectators, nobody came to watch them play. They must be pretty bad since nobody came to watch them play. But anyway, nobody came to watch them play, but the score is published in the paper the next day. The score is fifty to nothing.

Well, one team had eleven players, and on the other team only eight showed up to play; and naturally, you had a lopsided score. Nobody was there to know that there were only eight players. Now, if somebody had been there to say,

well, the team with eight players really showed up and did pretty well.

And that's the same way it is for diffusion capacity corrected for the alveolar volume. The alveolar volume is telling you that we know how many players were there, and so the diffusing capacity has to be corrected for the alveolar volume, or it's not [116] accurate. In fact, many doctors don't even look at the diffusion capacity itself. They look only at the diffusion capacity corrected for the alveolar volume to see whether or not diffusion is normal.

Now, actually, diffusion capacity itself is a very good thing to look at because it is the very earliest sign you can have if a person has had some lung destruction, most often emphysema that hasn't shown up yet in some other way.

Q Doctor, in a person with asbestosis, will their diffusing capacity, corrected for alveolar volume, correct to normal levels?

A No. It will not.

Q Is that in most cases, or is that in every case?

A That's in 99 percent of the cases, that's in the vast majority, so vast a majority that it's likely not to occur except as a very rarity.

Q Doctor, we mentioned earlier your qualification as a NIOSH certified B-reader. I'm not sure how in-depth we went into the training to attain that certification, so I'd like to take just a moment of your time to talk about that with you.

[117] You said, I believe, you were first certified as a B-reader in 1981?

A Yes.

Q What type of training, on top of your medical school education did you undertake in preparation for taking the NIOSH B-reader examination?

A Well, as a medical student you're exposed to reading of all types of X-rays. As a resident in internal medicine,

you're also exposed to how to read all types of X-rays. As a pulmonary fellow—the two years of doing that, you concentrate only on reading chest X-rays, CAT scans of the chest, MRI's in the chest, other types of tomograms and studies of the chest. And so, all throughout your pulmonary training, you have to study intensely how to look at the X-ray.

In fact, one of the textbooks that I have states that you haven't examined the patient with a chest problem until you've looked at the X-ray. And you can imagine—you've been poked and prodded by a doctor, I'm sure, most of you have, and your abdomen is soft, your belly is soft and your muscles are thickened and poked and prodded, and so forth, but the chest can't because it had this rib cage all around it. So you [118] can't poke and prod the lungs and the heart and so forth.

There's no way to do that, so the only way for the doctor to look inside, other than using his eyes to see how the chest moves, his hands to feel for any abnormal feelings that there can be such as rubs, or friction rubs from pleural disease or pleurisy, or thumping on the chest to listen to how sounds—does it sound the right way? And listening with a stethoscope. Other than that, the only thing the doctor can do is look at the X-rays.

And so, the pulmonary doctor has to spend a lot of time just studying X-rays of the chest of different types. But in your pulmonary training, we're not taught to look at X-rays to see whether or not there is coal dust disease, or sand dust disease, or asbestos disease, or anything like that. It might come up occasionally, but that's about it.

The B-reader course is to teach you how to do this. If you will, it's like code that's used to classify these X-rays. And a person that is familiar with the code, sort of like a secret society, can fill out this sheet and it can be sent around the world to a [119] doctor over in Australia and he could look at

this and if he's familiar with the code, he can imagine in his mind what that X-ray would have looked like.

It is so difficult to learn to read these X-rays, and to actually, say, pass that test to become a certified B-reader, it's a six-hour examination, and you've got to go through an X-ray every four minutes during that examination.

And so, it's a really rigorous test. And when I took it, there were as many as half the people who took it at that time who failed the test and did not pass. I believe it's a little better now, that it might be up somewhere between fifty and sixty percent that might pass it. But I don't think it's much better, because it's such a difficult system to not only learn, but to do in a practical way, and that is actually to read the chest X-rays.

Now, during the test, you don't just read X-rays for dust disease, you read for whether or not the quality of the film—you're able to read the film. There are some films you just can't read. They are just too bad. And like I said, garbage tests will get you garbage results, so you have to toss out those films. [120] You'll say they can't be read. You have to know which films to toss out, you have to know other diseases that are on the X-ray. You have to know tuberculosis and cancer and heart disease and some other things that you find on the X-rays besides dust disease that are caused from an occupation or exposure.

And because it is such a difficult test, the only requirement that there is is that you attend a three-day seminar which is jointly sponsored by the American College of X-ray and the National Institutes of Occupational Safety and Health. If you attend that three-day seminar, then you can take the test.

Well, I don't know how anybody that can attend that three-day seminar and then pass the test. And so, I studied under one of the people who actually helped to teach the B-reader course, that's Dr. LeRoy Lapp at the university. I studied

under him a year before I even took the three-day seminar. At the end of that year, then I took the seminar and then took the test and passed it.

Q You did pass that the first time you took it?

A Yes.

[121] Q Doctor, could you teach me, or could you put up X-rays today on a view box and teach me to be a B-reader today?

A Not today, I couldn't. If I had enough time I could teach you to read, but it would take weeks, months, the amount of time that I spent with a medical background to read these tests, to read these X-rays.

Q Is there any way that you can set up a view box today, with X-rays, and teach the jury to look for those things that a B-reader would look for in making a diagnosis for asbestosis or dust-related disease?

A I could show the jury, but I can't teach them in a few minutes, to actually look at an X-ray and actually pick out, out of all those shadows what is considered a shadow consistent with a pneumoconiosis, or asbestosis.

Q Could you teach us enough just to be able to distinguish these arteries? Could you show us enough that I could distinguish that without your guidance?

A No.

Q Do you think there are any B-readers, or any teachers of the B-reading class who could come in [122] and teach the jury those things in five minutes or ten minutes?

A No.

Q You've talked about what's involved in doing a B-reading of an X-ray. What I have is, I think, the ILO form that you completed for Mr. John Shirley. If you will just explain some of the things that are on an ILO form for the jury, step down and do that if you'd like; just the different categories where you would indicate certain findings.

A Well, as I said, this is a code system, so all it is a marking from the different areas that then tell someone else

who just looks at the sheet what you were really looking at, when you're looking at the X-ray itself. First, you have to look at the quality of the film and decide whether or not you can actually read it for pneumoconiosis. Now, you might be able to read it for other diseases, but you can't read it for pneumoconiosis, then you should not. And you have to grade it as film quality one, two or three; three being the worst. But if it's not readable for pneumoconiosis, then it's U/R, which is unreadable. I mean, you would not go beyond that. And if you have anything other than [123] film quality one, you are supposed to state why it's like that.

Q What reasons would cause a film to be other than quality one?

A Well, it can be—well, you have an X-ray technician that, maybe, has some money in the power company and wants to use more electricity to shoot the X-ray. And so it will be overexposed, or it will be so washed out, and we make a joke with X-ray doctors, that they can cure a pneumonia if they use enough X-ray. It just makes it disappear. If they completely over shoot it it will be black and will wash it out. Same thing if they use too little. It will be underexposed and we'll see a whole lot of stuff that you ordinarily would not see. And some of the other things that will make it more difficult is if you've got your shoulder blade, and they don't have the person get their shoulder blades all the way around the side of the chest, then the shoulder blades will be in the way of the lung; and you're looking at the shoulder blade and the lung. And in looking at the lung, what we're doing is making a black picture out of a three dimensional object. And so, what you've got in that three dimensional object is you've [124] got something from here, that's added to everything back to here. So you have what is called a summation shadow; you're seeing the sum of everything that was in that X-ray. The X-ray can be—the person can be turned wrong. There are a lot of things that can go to reduce the quality of the X-ray, though. And then the next thing that you do is you

look at whether or not the film is negative, meaning since you're reading for pneumoconiosis, and other diseases, is it negative for everything? And if it's not, then you check "No". Then you decide for this question: Are there any (inaudible), meaning, lung tissue, abnormalities consistent with pneumoconiosis. And you notice that it says, "Consistent with pneumoconiosis." The X-ray does not diagnose pneumoconiosis. It's either consistent with it or inconsistent with it. There is no way that the X-ray can absolutely diagnose anything that requires more than that. To diagnose any pneumoconiosis such as coal workers' or asbestosis.

The next question: If you find any of these abnormalities then you mark these areas and you mark, P, Q, or R, around the things which are associated with coal workers' and silicosis. S, T, and U, which [125] are irregulars which are associated with asbestosis. And then you state where it is. Is it in the upper zones of the lungs, the mid zones of the lungs, or the lower zones of the lungs. And then you have to say, how much is it distributed? And there is a twelve point system for saying that. If it is 0/-, that's a barn door normal. You almost don't see a 0/- unless you've got somebody twenty, twenty-five years old. Because as you age, you get a little age of the lung, also. A 0/0 is normal. A 0/1 means that you thought it was normal, or maybe, that you considered that it might be a 1, or a category.

Now, what are the standard film, there are standard films that you put up. They are one side versus the other side with the X-ray. Standard films, there are only these right here. There are no 1/0's, 2/1's, etc. There has been a consideration of doing that, but there are none. The doctor has to use his mind's eye. He put's up the 0/0, the 1/1, or the 0/1 or 2/2. Sort of uses his eye to prepare and see what subject X-rays and a little of how they should look.

And there are the standard films for what are called large opacities. These generally occur in [126] coal workers, with

silicosis, but they don't occur in asbestosis, except in extremely rare conditions. And then you go to the lining of the lung. And there are two groups of pleura, the sides against the lungs, the sides against the chest wall. And then there is a little film of liquid in between, a very thin film. The only reason for that is because the lung to move across the chest wall, and if it didn't move smoothly, you'd scream with every breath; and then you'd have pain with every breath. So you look to see whether there are any pleural changes that might be consistent with pneumoconiosis, and then mark that. And then down here, under other symbols, these are other diseases, and also, have to do a little bit with pneumoconiosis. Not much. There are a couple of them that have to do with pneumoconiosis. The others do not. For instance, EM is emphysema, EF would stand for infusion, or fluid in the lung space. And then down here is a place for the doctor to make comments about the rest of the chest and other diseases that he's found that don't fit in here. And in this particular gentleman, Mr. Shirley, he has wire, he's had a heart operation so he's got wires holding his breast bone together. He's had a valve put [127] in, an artificial valve, and that shows up on X-ray. He's got a what's called a pleural stripe because he's over weight and that's the fatty tissue that overlaps on the chest X-ray. And then he's got a little bit of increase here in what is likely related to his heart valve, his heart surgery. And I think he's had congestive heart failure and he's got a little bit of ongoing type of congestive heart failure.

Q This is what we refer to as an ILO form; is that right, Doctor?

A Yes.

Q When you look at an X-ray and do a B-reading, is there any part of a chest X-ray that you look at, or do you look at the entire chest X-ray because if you're only looking at part of the chest X-ray, then you lose other clues that will tell you actually what's going on in the chest X-ray. For

instance, you can have little lines that appear in the outside of the chest X-ray, but if you are only looking at that part, you might say that those were lines that are consistent with a pneumoconiosis some type. However, if you look at the rest of the X-ray, and you see that the heart is enlarged, and you see that there [128] is distention of the vascular clarity and the upper parts of the lungs, then you know that those lines are probably just interstitial edema because of heart failure. So, if you've restricted yourself to looking at only a piece of the lung, you're really losing your clues that would help tell you what those changes are so that you can answer the question fairly whether or not it's either consistent with, or inconsistent with a pneumoconiosis.

Q Will changes caused by smoking appear in an X-ray?

A Yes.

Q What type of problems created by smoking will appear on chest X-ray?

A Well, tobacco smoking, of course, is the major reason for emphysema. Over 95% of the cases of emphysema are all caused by tobacco smoke. There are a few that are other causes for emphysema, but one that's inherited. But most of it is caused by tobacco smoke. So emphysema is one disease that you can see on the X-ray. There is also one called respiratory bronchiolitis, or tobacco smoke induced respiratory bronchiolitis. And what this is is a thickening around [129] the bronchial tubes, which appears like line shadows, or irregular shadows, and it has been estimated that in up to—that all smokers have this; all tobacco smokers have it, but it becomes apparent on the X-ray in about 7-10 percent of people. And it shows up as line shadows that can be confused with a pneumoconiosis, such as asbestosis.

Q Very briefly, how does smoking affect the lung in terms of impairing the lung? I know that those two terms are inconsistent, but just in a thumbnail sketch.

A Smoking paralyzes the ability of the lung to remove things, remove foreign objects from the lung. It paralyzes

what's called the ciliary system, which is little hairs beating in the lung to carry the mucous out so that whatever mucous is trapped, whatever we've breathed out of the air, the dust, the bacteria, viruses. Whatever we've breathed in that's trapped in the mucous and carries it out.

I'd give you an example of the hair that moves out, but I don't have much experience with hair, so I can't give you that example. The lung, when it retains this mucous, eventually, mucous glands begin to [130] cause more mucous, and the mucous builds up and the person gets what's called the smoker's cough in the morning. Generally, in the morning, because the mucous builds up overnight, and then they clear that in the morning and they're pretty good throughout the rest of the day. Eventually, it builds up to where they're coughing up mucous all throughout the day, also. And this is called, then, chronic bronchitis. And after the person develops chronic bronchitis, most doctors now believe that is a stage of, and a preliminary to developing emphysema. An emphysema is an actual destruction of the lung, where those little air pockets, alveoli, are destroyed and they break down, the walls break down in between.

Q Does cigarette smoking impair the lung's ability to get air, or take the carbon dioxide out of the blood?

A It impairs the ability to get air out when you have chronic bronchitis that results in obstruction, and then it impairs the ability to get oxygen in as the chronic bronchitis becomes worse and the emphysema develops.

Q So cigarette smoking then, at least in [131] most cases, or until you develop emphysema, causes an obstructive type of respiratory impairment; is that correct?

A And emphysema is an obstructive defect. Yes.

Q So when a doctor refers to something as chronic obstructive pulmonary disease in a smoker, is that generally referring to the condition of his lungs related to smoking?

A Yes. Actually, there are only in very strict classifications in what's called COPD, there is only chronic

bronchitis and emphysema. Asthma is not included. That's a different type of disease. But it's still an obstructive disease, but it's not classified under chronic obstructive pulmonary disease.

Q Doctor, does smoking cause cancer?

A Yes.

Q What is the number one cause of cancer in the United States?

A I believe tobacco smoking is the number one cause of lung cancer in the United States, and throughout the world.

Q When someone talks about an exposure to [132] asbestos, what does the word "dose" mean to you?

A Well, it means the same as if they were taking medication, it would be whether they took ten milligrams, or twenty milligrams, or a hundred milligrams; and it would be the same with the dose of asbestos. It would mean that they either had ten fibers, twenty fibers or a hundred fibers that they were exposed to and took into their lungs or their respiratory system.

Q What does latency mean?

A Latency is time from first exposure to a substance, to the time when you expect a disease process to develop from that exposure.

Q Doctor, if we discuss asbestos, is latency affected by dose?

A It is in some cases, or some of the different asbestos diseases.

Q Let's discuss asbestosis. Is latency affected by your dose exposure to asbestos?

A Well, it's said that asbestosis is more likely to develop if you have a shorter, higher exposure to it, then if you have a lower exposure and a longer duration.

[133] Q If someone has a history of exposure to asbestos with a long latency period before development of asbestosis, can that inversely tell you something about the type of dose exposure they may have had?

A It tells you that it was lower to begin with.

Q What's the average latency period within reason, as regards development of asbestosis?

A About twenty years.

Q What's the shortest latency period in reason, as regards development of asbestosis?

A Well, I've seen literature to the effect that it can be as short as fourteen years.

Q Will that be with extremely high exposures? The fourteen years' latency?

A Yes.

Q What's the longest latency as regards development of asbestosis that you're aware of?

A Well, that I'm aware of in my practice, it has gone as high as thirty years, but no higher than that.

Q Doctor, if a person has asbestosis, how does that show up on pulmonary function tests?

[134] A It shows up as a restrictive defect. It shows up as a normal FEV1/FVC ratio. A forced vital capacity that's below the lower limit of normal. It shows up as a reduction of the total lung capacity, on the lung volume study, and a proportionate reduction of the residual volume. It will also show up in a reduction in diffusing capacity and will remain reduced when it's corrected for the alveolar volume.

Q Doctor, if you have a worker who was exposed to asbestosis many years ago, is now retired and is in his late 60's, early 70's and he has not developed asbestosis. Of course, in that question we assumed he had asbestos exposure some years ago. Could you state to a reasonable degree of medical certainty that that person wouldn't develop asbestosis given the latency?

A Yes.

Q And, I should say, that in that I assume a latency of forty years, or so.

A Yes.

Q If a person in their, or in his or her 60's, or 70's does develop asbestosis, do you believe to a reasonable degree of medical certainty, that that person would have a progression if they only had a 1/0, [135] or 1/1 diagnosis of asbestosis.

A Are you talking about a significant progression?

Q The fact of significant progression.

A Well, a significant progression to the point where they would have some level of lung impairment from asbestosis. If they are at that age group, in the older age group, the likelihood in the older age group is that they are not going to significantly progress before some other disease process develops that would shorten their life span. Such as heart disease, or some other—maybe diabetes that they have has caused their kidneys to fail, or something like that.

Q Doctor, can you state to a reasonable degree of medical certainty that exposure to asbestos, without development of asbestosis will shorten a person's life expectancy?

A No.

Q Your answer was "No" you could not state to a reasonable degree of medical certainty that a person to exposure to asbestos wouldn't have a shortened life span as a result of that exposure to asbestos even [136] without development of asbestos; is that correct?

A I'm not sure I understand, yet. If a person is exposed to asbestos, but does not have asbestosis, and will it shorten their life span if they have not developed asbestosis?

Q Right.

A No, it will not.

Q I touched on this a moment ago, if a person in their late 60's, early 70's X-ray evidence of asbestosis, say a 1/0 or 1/1, diagnosis of asbestosis, does the slight degree of profusion impact in any way, your opinion regarding likely progression of that disease?

A Yes, because in that particular low profusion category, there is a small percentage of progression that will occur of maybe 8%, in some studies up to 25%. But again, in the older

age group, you usually have other disease processes that are going to shorten their life span before there can be significant progression to the point to where it would shorten their life span.

Q When we looked at the ILO Form a moment ago, you pointed out the symbol regarding pleural [137] changes, consistent with asbestos exposure; is that correct?

A Well, a pleural plaque—if you ever went to the movie theatre in the old days—well, maybe still, I don't know. I quit putting my hands underneath the seat at the movie theatre a long time ago, because you get all of these wads of gum underneath the seat. A pleural plaque would be just like that. It would be like a wad of gum that somebody had stuck up underneath the seat. If you look at the inside of a chest, up against the ribs, and you would have that wad of gum stuck right there to the chest wall where the ribs are, and it would just appear as a smooth little wad that had been planted up against the chest wall. Or I never did this when I was in school, but spit balls on the ceiling, would be the same sort of thing like maybe a plaque that would be hanging on the ceiling.

Q If a person has a pleural plaque, caused by asbestos exposure, is there any literature that supports the proposition that the pleural plaque will turn into asbestosis?

A No.

Q Does a pleural plaque cause any pulmonary [138] impairment?

A No.

Q If a pleural plaque has been caused by asbestos, what does that tell you?

A It just tells you that they've been exposed to asbestos, it doesn't tell you anything else.

MR. BAKER: Your Honor, this would probably be a good time for a short break.

THE COURT: Okay. Let's take ten minutes.

(Whereupon, a brief recess was taken after which the following proceedings were had)

BY MR. BAKER:

Q Doctor Renn, I'd like to talk to you now about your practice, or the testing regime you have when someone to be examined comes to your office. How do you begin your testing protocol?

A Well, they come in and are checked in by one of my nurses, who takes certain information, such as a list of medicines that they have and then takes their vital signs: blood pressure, pulse, and so forth. And then places him in one of the examination rooms so that I can go in and talk to them, and do the interview, take [139] all the histories, and do physical examination. After that, then go for the various laboratory tests.

Q Do you take the actual occupational history?

A We have them fill out a form which has the occupational history. They fill that out so that they have time to remember the dates, and so forth, if they don't bring one with them. But then, after that, I take that form and go over that form with them and fill in the gaps, or help to amplify that, or ask questions if they haven't put down enough on that particular form.

Q When we say occupational history, that's a work history with any alleged exposures?

A Yes.

Q You also take a cardiopulmonary history, don't you?

A Yes.

Q Is that taken by you or is that a result of the data you collect?

A No, it's taken by me.

Q Do you also take the smoking history?

A Yes.

Q Do you take the personal history?

[140] A Yes.

Q Do you take the family history?

A Yes.

Q The past medical history?

A Yes.

Q Do you also take the review of symptoms?

A Yes. Systems.

Q Sorry. Systems. Who performs your laboratory evaluations?

A The laboratory tests are performed by the technicians who are certified to do those tests. If the technician, for instance, in pulmonary function testing is having some difficulty, he or she may come and ask me to help out, but they perform the actual testing procedures.

And the only testing procedure that I might perform, or that I do perform, is if the person undergoes an exercise test, and then I am there to not only do part of the testing, but to make sure that it's done safely.

Q Does an X-ray technician take your X-ray?

A Yes.

Q And your pulmonary function tests are [141] taken by a pulmonary technician; is that correct?

A Yes. Certified pulmonary function technician.

Q Is the procedure that we just discussed and the areas of history that we just discussed the same in every evaluation that you did?

A Well, they are the same within certain limits. Some people you can do exercise testing, some you can't, for various reasons, some can undergo some tests, or there are indications that they should have certain tests, whereas others should not. For instance, in some individuals an echocardiogram may be necessary, but that is on a case specific basis, and not given to every person.

Q But as far as the type of histories that I've discussed, the occupational, the cardiopulmonary, the smoking, medical, family, past medications history, all those are taken as a part of every evaluation; is that correct?

A Yes.

Q Then the testing that you determine is necessary, or that can be done safely is then performed; is that correct?

[142] A Yes.

Q Doctor, I'd like to begin by talking about Mr. James Spangler. Do you have his report with you?

A Yes.

Q Well, the most important part is that he's had pneumonia on several occasions, which is not uncommon in people with obstructive airway disease, because the infectious agents can't get out. He's been a long time tobacco smoker. He's—by the history he gave to me, he's had about a 112 pack years of tobacco smoking. So a pack year is a pack a day for one year, and so he's done that. There are times that he's smoked more than two packages a day, and when I interviewed him, he was smoking three quarters of a package a day. So I calculated it out to 112 pack years. He's on various breathing medications for obstructive airways disease of some type, and on his physical examination he had—when you listen to his lungs, he had a long period of breathing out, which is consistent with an obstructive disease. He had what are called rhonchi, these are large airway obstructive sounds, and he also had wheezes which are smaller airway obstructive sounds. [143] On his laboratory testing, he had breathing tests which showed severe obstruction on his spirometry.

Q Doctor, which test would show the severe obstruction that you just mentioned?

A That would be the FEV1/FVC ratio, which was 43% before bronchodilator, and it was 43% after bronchodilator, so it's below the lower limit of normal; and that indicates if we look at the FEV1 and the FEV1 is then below the lower limit of normal and its percent of predicted was 48% before bronchodilator and 53% after bronchodilator. And that indicates that he has a severe obstructive defect, or an obstruction to the outflow of air.

Q Doctor, did any of the pulmonary function tests, or lung volume studies that you did indicate that Mr. Spangler had a restrictive condition?

A No, in fact, he has the opposite. His total lung capacity indicates that he has hyperinflation—it's elevated, and so he has over inflated lungs. And he also has air trapping, or trapping of air in the lungs which is what you expect in emphysema with the big balloons and the narrow neck to the escape of air from the balloon.

[144] Q Did Mr. Spangler, have a diffusion capacity that was normal?

A No. His diffusion capacity was abnormal, it was reduced, and it does remain reduced when you look at the alveolar volume.

Q That would be DLCO/VA?

A Yes.

Q Doctor, did you take a chest X-ray of Mr. Spangler? Did your technician take a chest X-ray?

THE COURT: Yes, ma'am.

JUROR NO. 4: We can't see what's going on.

MR. BAKER: Do you need to have those moved closer to you? I'm sorry.

BY MR. BAKER:

Q The X-ray that was taken in this case, did you do a B-reading on that X-ray or X-rays?

A Yes.

Q Could you tell the jury what you found, or what you saw on the X-ray that you did a B-reading of?

A I saw that he had a plaque of the diaphragm, of the right side and that it had calcium in it, and so, there is a length of the calcium you grade. [145] And this is the length that I found. I found that he had emphysema, I found that he had what's called bullous emphysema, or big balloons-type of

emphysema, and I stated that he had a very large bullae of the left lung which occupied more than two thirds of the left side of his chest.

Q Is it just like a balloon inside the left side of his chest?

A Yes. It's like somebody would just stick a balloon in there and somebody would just stick a balloon in there and just blow it up, keep blowing it up. And what happens is that the lung gets pushed, or what normal lung gets pushed somewhere else; gets pushed and squeezed together. And in fact, I said that he might benefit from what's called bullectomy, which means that if this was removed, that the what normal lung is there could expand, and maybe, help him with his breathing. And I believe I sent him a letter to this effect.

Yes, I did, I told him that maybe he might get some benefit from that, if he would go see a lung specialist, or even a surgeon who would operate to remove that.

[146] And then he has a lot of these bullae, or several of these bullae, that are pushing down on the lung and it squeezes everything together, makes everything look more dense down on the bottom of the lung. And in emphysema you'll get this kind of thing, because the diaphragm can't move as well. It's also pushed down, so you get what looks like a blunting of the diaphragm. And then these little metal clips. They were just from an old operation that he had to correct an esophageal hernia that he had. A hernia of the esophagus.

Q Did you reach a—I note in what's identified as page three of the pulmonary function report, you discuss a severe obstructive ventilatory impairment. Is that the impairment that's related to the emphysema?

A Yes.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to the cause of Mr. Spangler's severe emphysema?

A Yes. I believe it's from his years of tobacco smoking.

Q Doctor, does exposure to asbestos cause [147] emphysema?

A No.

Q What do you believe has caused or contributed to the moderate drop in Mr. Spangler's diffusing capacity?

A Well, that's from destruction of the lung, which is from the emphysema.

Q Emphysema will cause a drop in the diffusing capacity?

A Yes.

Q Doctor, did you reach, or can you say to a reasonable degree of medical certainty your opinion as to whether Mr. Spangler has a pneumoconiosis, including asbestosis?

A I believe he does not.

Q Doctor, do you believe to a reasonable degree of medical certainty that Mr. Spangler has markers of having been to asbestos?

A Yes.

Q Can you state to a reasonable degree of medical certainty whether the markers, and those are the pleural changes that you discussed, have any likelihood of causing a decrease in Mr. Spangler's expected life?

[148] A They do not.

Q Doctor, based on your review of the medical testing that you did in this case, can you testify to a reasonable degree of medical certainty as to whether you believe that Mr. Spangler will develop asbestosis at some time in the future?

A I believe that he will not. He has not to this point and I believe that he will not.

Q I'm sorry. Before we move on I would like to show you—Doctor Renn, I'm handing you what's been marked as Defendant's Exhibit No. 6. Would you please take a moment to look at that, please? Doctor, would you tell the jury what Defendant's Exhibit 6, is?

A It's an X-ray reading by Dr. Capiello, of an X-ray dated 9/1/95 for a James M. Spangler.

Q And what was the impression for the chest X-ray?

[A] It says residual fibrosis in the area of prior infiltrate, severe segment of the left lower lobe with what appears to be small thin walled cavity. There seems to be some severe particle disease in this region and the infiltrate may not be totally resolved. The remote possibility of this representing an atypical presentation of TB, standing for tuberculosis, cannot be [149] excluded, and in addition, if clinically warranted, a CT scan, a CT of thorax may be contemplated. No evidence of new infiltrate elsewhere, no evidence of cardiomegaly, or CHF, standing for congestive heart failure.

Q Did you say that was Dr. Capiello?

A Yes.

Q Is Dr. Capiello a NIOSH certified B-reader?

A To my knowledge, yes.

Q Doctor, I'd like to hand you what's been marked as Defendant's Exhibit 7. Would you tell the jury what Defendant's Exhibit 7 is?

A This is an X-ray from the Bluefield Regional Medical Center, dated 12/30/95, for James M. Spangler. It's interpreted by Dr. Acoff.

The impression is, "Patchy right lower lobe pneumonic infiltrate believed to represent new findings since previous photo of 10/6/95. COPD. Chest otherwise unremarkable".

Q Is Dr. Acoff, is that Dr. Edward Acoff? Is Dr. Acoff a B-reader?

A To my knowledge, yes.

[150] Q Doctor, I'm handing you what's been marked as Defendant's Exhibit 8. Would you take a moment to take a look at that record?

A Yes. This is James M. Spangler from Bluefield Regional Medical Center. The date is 6/18/96. It's interpreted by Dr. Acoff, signed by Dr. Shahan. The impression is: "Pleuroperitoneals scarring of left lower lobe, with associated

large bullous changes and progressive overall improvement in appearance of left lung infiltrates and previous study of 5/31/96. COPD suggests continued follow-up examination as clinically indicated for further evaluation".

Q I'll hand you what's been marked as Defendant's Exhibit No. 9. Would you take a moment to look at that and then tell the jury what that is?

A This is James M. Spangler, from Bluefield Regional Medical Center, date of examination is 12/16/96. It's interpreted by Dr. Capiello. The impression is: "Advanced changes of COPD, with emphysemas bullae. Both lungs increased in size and number from the comparison study.

Q Doctor, in Defendant's Exhibits 6 through 8 that were interpreted by B-readers, was there any [151] mention of Mr. Spangler having asbestosis in any of these X-ray interpretations?

A No.

MR. BAKER: Thank you. Your Honor, I would move the admission of Defendant's Exhibits 6, 7, 8, and 9.

THE COURT: Without objection they will be received.

(Whereupon, the documents previously marked Defendant's Exhibits Nos. 6-9, were admitted and made a part of the record)

BY MR. BAKER:

Q Dr. Renn, we didn't touch on this a moment ago. I'd like to do that now. When you take a history of exposure from someone who comes to you for an evaluation, do you accept their history as accurate?

A Yes.

Q Do you have any way to judge the accuracy of the history they've given you?

A No. There is no way for me to judge.

Q So you accept that every person that [152] comes for a evaluation has a reliable history of exposure?

A Yes.

Q I'm reading from what had been marked as Defendant's Exhibit No. 5, and this is a copy of the ATS guidelines. Are you familiar with these guidelines, Doctor?

A Yes.

Q What are these, briefly?

A They are guidelines that were published in an official statement by the American Thoracic Society, I believe in 1986, that is for the diagnosis of nonmalignant diseases associated with asbestos.

Q And you always accept the reliable history of exposure and you checked that "Yes"; is that right?

A Yes.

Q Do you accept that a plaintiff, or a person who comes to see you for an independent medical evaluation has a sufficient interval between exposure and the time they're having the examination, if their history indicates to you that they've had the latency period?

[153] A Yes.

Q In your examination of Mr. Spangler, and his X-rays and pulmonary function tests, did you find any X-ray evidence of Type S, T, or U, small irregular opacities of a profusion of 1/1, or greater?

A No.

Q Doctor, I want to touch on that for just a moment. Explain to he jury, if you would, what is a profusion of 1/1 required by the American Thoracic Society before a B-reader can diagnose asbestosis?

A It's not required, it is a suggestion or guideline. It's not required. And in fact, I've diagnosed people that have had profusion categories lower than that, a profusion category lower than that of 1/0.

Q Where does most inter-reader error occur in interpreting X-rays?

A It occurs in the very low profusion categories of 0/0, 0/1, 1/0, 1/1.

Q So that's the hardest place for different B-readers to get the same readings of the same X-ray?

A Yes. Very difficult.

Q Doctor, in your examination of Mr. [154] Spangler, did you determine a restrictive pattern of lung impairment with a forced vital capacity below the lower limits of normal?

A No.

Q Did he have a diffusing capacity below the lower limit of normal?

A Yes.

Q And you attributed that to his emphysema; is that correct?

A Yes, when you have a confounder you can't use that particular criterion because you have a confounding factor.

Q Yet something is causing one of these criteria to occur.

A Yes.

Q On your examination of Mr. Spangler, did you note any bilateral, late, or pan inspiratory crackles of the posterior lung bases not cleared by cough?

A No.

Q If you would get your file on Mr. Ayers, please. Dr. Renn, did you follow the same testing procedure, as you recall, with Mr. Ayers that you did [155] with Mr. Spangler?

A Yes, I did.

Q In looking at the history and the test results you have regarding Mr. Ayers, what parts of your findings were significant in your opinion?

A Well, Mr. Ayers had had a heart attack. In the 1980's he had become disabled because of that. He had a smoking history of 40 to 50 pack years. He had a stroke and he had some residual paralysis as a result of that stroke. He had—that was on the right side. And then on his X-ray, he had over expanded rhonchi. On his X-ray that is all. And he had on his spirometry a mild obstructive ventilatory defect. And those were the important parts of his examination.

Q When you say he had a mild obstructive ventilatory defect, would you please step down for a moment and outline, or highlight on the spirometry report those things that led you to conclude that he had a mild obstructive defect.

A His FEV1/FVC was 67% before and 67% after the bronchodilator. Now, although this is below the predicted which would be the mean predicted for him, it was not below the lower limit of normal expected for his [156] age of 70. So technically speaking, I could have said this was a "normal" test, if I went only by the numbers. However, in looking at Mr. Ayers' graphs, and this is why it's important for the doctor to also look at the graphs. I will show you—you can take this and pass it around. If you look at this down in the lower right hand corner, this is the time-volume curve. And you can pass that to each person, but his time-volume curve, instead of showing the normal, which would have been flattened out as it went up, his showed that he went up and then continued to go up, very slightly. And so, although his numbers looked normal for his age, he has some mild obstruction; and so I said that he had the mild obstruction.

Now, if you notice that he had—before bronchodilator he had 96% of predicted of his FEV1, and after bronchodilator, 101%.

Q Dr. Renn, what's a bronchodilator? I hate to interrupt you—

A They are medicines that are used to open the bronchial tubes. And in a person who has more than a hundred percent of predicted, they are considered very normal. So he's pretty close to normal and that's why I [157] said that he only had mild obstruction. But it was from the graph tracing itself, rather than just going by the numbers which you can't always go by. You have to give some benefit of the doubt to the person and what the graph tracings also show, and that's why it's important for the doctor to look at the graph tracings, too.

Q Doctor, was there any abnormality in Mr. Ayers' total lung capacity, or residual volume?

A No. There was not, it was normal.

Q At 136% of predicted? Would that be considered normal residual volume for a person with an obstruction?

A He would have a little bit, a little tiny bit of air trapping there, perhaps, but if you look at the difference between the predicted value and the actual value, and then the ratio of the two, it's really proportionate, almost proportionate. And so, there is really not much in the way of air trapping.

Q Was Mr. Ayers' diffusing capacity normal?

A Yes.

Q Did it remain so when corrected?

A Yes.

Q When you reviewed Mr. Ayers' chest X-ray, [158] did you find any abnormalities?

A Only that it was over expanded. And that is the hyperinflation part here (indicating).

Q When you say it was over extended, do you mean the lungs?

A Yes. It's almost a code word that's used by X-ray doctors, now. Instead of saying that a person has COPD, or that they took a really, really deep breath, or that they have asthma, they don't know that, they can't tell that from a X-ray. They can sometimes tell emphysema from an X-ray, but they can't tell anything else if the lung is over expanded. So they just put hyperinflation, which is it could be COPD, it could be asthma, it could be that they just took a really, really, deep breath, and he's the kind of person that can take a really, really, deep breath.

Q Doctor, then to ask you regarding, Mr. Freeman Ayers, you would agree that you had a reliable history of exposure; is that correct?

A Yes.

Q And you would agree that you had an appropriate time interval between exposure and latency?

A Yes.

[159] Q Was there any chest X-ray evidence of pneumoconiosis?

A No.

Q Did he have a restrictive pattern of lung impairment with a forced vital capacity below the lower limit of normal?

A No.

Q Did he have a diffusing capacity below the lower limit of normal?

A No.

Q Did he have any bilateral, late or pan inspiratory crackles at the posterior lung bases not cleared by cough?

A No.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether or not Mr. Freeman Ayers has asbestosis, or any other pneumoconiosis?

A Yes. He does not.

Q Doctor, do you have an opinion to a reasonable degree of certainty as to whether Mr. Freeman Ayers is likely to contract or develop asbestosis in the future?

[160] A I believe that he will not.

Q Do you believe that Mr. Freeman Ayers has any condition that may cause or contribute to a shortened life expectancy?

A Well, he's had his old heart attack, which indicates that he has coronary vascular disease. That will shorten his life span. He also has had the stroke, and that is also gonna shorten his life span. He is overweight which is also another risk factor for shortening life span. He also has high blood pressure which is known to shorten life span and he had an abnormality of his blood, which is not better defined and I don't know whether he has anything really wrong with his blood, or not, because that has to be checked further in order to say that.

Q Doctor, would the conditions that you've just talked about including having had a heart attack, high blood pressure, stroke, would those type of conditions contribute to any difficulties that Mr. Ayers may have testified about regarding his ability to do physical activity?

A Well, if you add all these things together, the very mild obstructive pulmonary disease, [161] the heart diseases, the fact that he has had the stroke and has some residual paralysis from it. All of that will contribute to making him feel as if he has to do more work to breathe.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to what caused the mild restriction that you saw on Mr. Ayers' pulmonary function test, spirometry, and lung volume?

A I didn't see any restriction of lung—

Q I meant to say the mild obstruction.

A He has the 40 to 50 pack years of smoking that would be adequate to cause him to have the mild obstruction that he does.

Q Doctor, would you please get your file for Mr. Doyle Johnson. Doctor, when you examined Mr. Johnson, did you follow the same testing protocol or protocol taking history, that you did, as we've discussed with Mr. Ayers and Mr. Spangler?

A Yes, I did.

Q In looking at your report, regarding Mr. Johnson, what things did you find significant?

A One of the most significant things, regarding Mr. Johnson, is the fact that in 1987, he had [162] a knee injury, and a cast was put on for his knee injury, and he developed a blood clot that went to his lung, known as a pulmonary embolus. Then he has a tobacco smoking history of anywhere between 34 and 64 pack years. He's had several skin cancers and one that is a very serious skin cancer, but apparently from which he's been cured. He's overweight by about fifty pounds above his ideal weight.

And in his laboratory testing he had an elevated white blood cell count, it's such that he might be developing what's called chronic lymphocytic leukemia. I found that he had some mild obstruction, that it did improve after bronchodilator treatment.

Q Doctor, if you would, would you take a moment to highlight for the jury, those things that indicated to you that Mr. Johnson had a mild obstructive impairment?

A Well, again we look at the FEV1/FVC and find it 65% and 70% after bronchodilator. That's below the lower limit of normal at 70 for him. Looking to the FEV1, it is 82% predicted before and 93% of predicted after. If it is in excess of 70% of predicted then it is considered mild obstruction, and so he has mild [163] obstruction.

The reason he has a significant—bronchodilators help him indicates that he has asthma, is that the FEV1 improved from 3.21 liters, up to 3.64, this is 430 milliliters. If it goes over 200 hundred milliliters that's considered significant. If it goes over 12% and 200 milliliters it's considered significant; and so he has significant improvement following broncho-dilator medication.

He does not have a restrictive defect because his total lung capacity is normal. So is his residual volume. And he does have a reduction in diffusing capacity and it stays reduced, and I believe the explanation for that being reduced is because of his pulmonary embolus and the death of lung tissue and the fact that some clot remains there that keeps blood from flowing into that area; however, there is still air that goes into that area and so the diffusing capacity would be reduced because of that.

Q Doctor, did you take a chest X-ray, or have taken a chest X-ray of Mr. Johnson?

A Yes.

Q Did you take an ILO reading as reflected [164] by the ILO Form? Would you tell me what you saw on that chest X-ray?

A I saw that he had only the abnormality at the left lower part of his lung, the abnormality could have been fluid, because I couldn't tell if it was just fluid from just that X-ray or if it was old scarring. Later on, I had other X-rays given to me that showed me that it was there and had been there and so it was old scarring that had resulted from the blood clots in his lungs. And so I read it as the likely reason, or if I found nothing else in his chest.

Q So then you found no indication on chest X-ray that Mr. Johnson had a pneumoconiosis, including asbestosis?

A That's correct.

Q You mentioned that you had additional chest X-rays made available to you that confirmed to you that the findings that you made on this report were consistent with the old pulmonary embolus; is that correct?

A Yes.

Q How many X-rays did you have an opportunity to review?

[165] A I had two other X-rays on two other dates. From 8/29/92, and then I had two from 8/28/97.

Q On any of the chest X-rays that you reviewed, did you find any findings consistent with the pneumoconiosis, including asbestosis?

A No.

Q I'm showing you what's been marked Defendant's Exhibit 11, and we'll both agree that you found both one and two, reliable history of exposure and an appropriate latency period; is that correct?

A Yes.

Q In your review of Mr. Johnson's multiple chest X-rays, did you find any X-ray findings consistent with pneumoconiosis?

A No.

Q Did you find a restrictive pattern of ventilatory impairment with the reduced or the forced vital capacity below the lower limit of normal?

A No.

Q Did he have a diffusing capacity below the lower limit of normal?

A Yes.

Q What was the cause of his diffusing [166] capacity being below the normal limits?

A I believe that's from his old pulmonary embolus.

Q And how would the old pulmonary embolus contribute to or cause a reduction in diffusion capacity?

A It blocks the blood flow, but the air is not blocked in that part of the lung and so it isn't any oxygen, or in this case carbon monoxide which is used for the diffusion capacity study, can't go into the bloodstream since there is no blood flowing to that area.

Q Did you hear any bilateral, late, or pan inspiratory crackles at the posterior lung bases not cleared by cough?

A No.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether or not Mr. Doyle Johnson has a pneumoconiosis, including asbestosis?

A Yes, he does not.

Q Do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Doyle [167] Johnson has asthma?

A Yes, he does.

Q Doctor, do you have an opinion as to a reasonable degree of medical certainty as to whether Mr. Doyle Johnson suffers from mixed dust pneumoconiosis, including asbestosis?

A Yes, he does not.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Johnson will develop asbestosis in the future?

A Yes. I believe he will not.

Q Doctor, to a reasonable degree of medical certainty, do you have an opinion regarding Mr. Doyle Johnson's prognosis for the future? Let me strike that question and ask you a different question.

Do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Doyle Johnson has experienced a life shortening event as a result of alleged exposure to dust?

A He does not.

Q Do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Johnson might at some time in the future develop a [168] pneumoconiosis associated with dust exposure?

A Yes. I believe he will not.

Q Would you please get your file on Mr. Clifford Vance. Doctor, when did you examine Mr. Clifford Vance?

A I examined Mr. Vance February 16, 1998.

Q Did you follow the same examination protocol that we discussed earlier?

A Yes.

Q Would you please tell the jury what portions of your file, or your report we got on Mr. Vance to be of interest, if any? I shouldn't have said of interest, I should have said of significance.

A Well, the whole file is of significance. It depends on what purpose you're gonna use it for. He has a hiatus hernia of his esophagus, which and the acid that comes backup on his esophagus, or his swallowing tube. In fact, he elevates the head of his bed, and uses one or two pillows to relieve that. And this is important because the acid can spill over into the lungs and the lungs don't like acid. They react very poorly to acid. He also has high blood pressure, which when I evaluated him was not controlled. He was taking high [169] blood pressure medication, but his blood pressure was still quite high when I evaluated him, and that's not good. As far as his tobacco history is concerned, it is anywhere from 47 up

to 71 pack years, and then I did the breathing tests and the chest X-rays and so forth and they were essentially normal.

Q Was Mr. Vance's diffusing capacity normal?

A Yes.

Q Did Mr. Vance have any spirometry test results that were not within the normal range you consider in looking for an obstructive or restrictive impairment?

A No, he did not.

Q So, in your opinion, did Mr. Vance have normal spirometry?

A Yes.

Q Were his lung volumes essentially normal?

A Yes.

Q Did he have any reduction in diffusing capacity?

A No.

Q Did it remain normal when corrected for [170] alveolar volume?

A Yes.

Q Did you take a Chest X-ray of Mr. Vance?

A Yes.

Q Did you have available to you more than one chest X-ray taken of Mr. Vance?

A Yes.

Q Would you please tell the jury what the chest X-ray that you had taken shows, if anything.

A He had only what's called linear, or line atelectasis, which means if you take the kitchen sponge and squeeze it together and close the air holes off, it will appear like a line. That sometimes happens in the lungs, especially someone who has had, say, some infection in that area, or they've had—or they're overweight and they are compressing that air of the lung. For many reasons you can have those little line shows that are called platelike because they look like the side of a plate—looking at a plate from the side.

Q Did you see anything on Mr. Vance's X-ray that indicated to you that he had a pneumoconiosis?

A No.

Q When I say pneumoconiosis, just so the [171] record is clear, that would include asbestosis, or what some call a mixed dust pneumoconiosis?

A It includes all dust diseases; silicosis, aluminosis, all dust disease.

Q Why was it important to you in this case to have other chest X-rays available for your review.

A Well, the other chest X-rays helped to determine whether or not there are changes that can be transient, or color it one time, and then are not present at another; and pneumoconiosis doesn't disappear. Whereas there are other changes that will disappear, such as heart failure, pneumonia, of course, that is cured, and so forth.

Q Doctor, I'd like to show you what's been marked as Defendant's Exhibit No. 13.

A It's Bluefield Regional Medical Center X-ray Report on Clifford A. Vance. The day of examination is 3/29/94. The impression is: Normal chest. And it's read by Dr. Capiello. In fact, he states above there are no stigmata identifiable to allow radiologic diagnosis of asbestosis.

Q This is the same Dr. Capiello that you indicated earlier was a B-reader?

[172] A Yes. I believe he's a B-reader.

Q And to the best of your knowledge was this chest X-ray interpretation rendered in aid of treatment of Mr. Johnson?

A I don't know. It's ordered by a physician by the name of Stephen A. DeGray. There is no indication why it was ordered.

Q Okay. Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether or not, Mr. Clifford Vance has asbestosis?

A Yes. He does not.

Q Do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Vance is likely to develop asbestosis in the future?

A Yes. I believe that he will not.

Q Do you have an opinion to a reasonable degree of medical certainty, if there are any factors in Mr. Vance's life that may affect his expected life expectancy?

A His high blood pressure is going to affect his life expectance if it's not better controlled.

MR. BAKER: Your Honor, I would move [173] admission of Defendant's Exhibit No. 13 at this time.

MR. RION: No objection.

THE COURT: It will be received.

(Whereupon, the document previously marked for the purposes of identification as Defendant's Exhibit No. 13, was admitted into evidence)

BY MR. BAKER:

Q As before you would agree that in Mr. Vance's case, he had had a reliable history of exposure and an appropriate latency period?

A Yes.

Q Did you see any evidence on chest X-ray of type S, T, or U of irregular opacities?

A No.

Q Did you see any evidence on lung testing of a restrictive pattern of lung impairment with a forced vital capacity below the lower limit of normal?

A No.

Q Did Mr. Vance have a normal diffusing capacity?

A Yes.

[174] Q So he had no reduction in diffusing capacity?

A That's correct.

Q Did you note on your examination of Mr. Vance any bilateral, late, or pan inspiratory crackles in the posterior lung bases not cleared by cough?

A No.

Q Doctor Renn, would you please get your file for Mr. Shirley. Would the same protocol followed for Mr. Shirley as to the previous people we've discussed?

A Yes.

Q Could you tell me what parts of your reports regarding Mr. Shirley are of interest to the jury, as to conclusions you reached regarding his medical condition?

A Yes. When I took his history, he told me he had a symptom which is called _____, meaning it occurs off and on, nocturnal, meaning it occurs at night, dyspnea meaning that he experiences forced breathing. I examined him on February the 18th, and he had had an episode on February the 15th, or three days before I examined him.

[175] It's not just getting short of breath, the person has to virtually leap out of bed because they are so short of breath, and they walk about, and they go to the bathroom and pass their urine, and they go back to bed and they can lie down and sleep the rest of the night without any problem. It doesn't happen to them again in the same night.

Now, it's different from people that have other breathing problems. It might happen to them two, three, four times; or asthma, or something like that. This is a very specific symptom and it means that they are experiencing little episodes of left heart failure. In other words, fluid is backing up into their lung and they are experiencing a little bit of left heart failure.

He also had two pillow orthopnea which means he props himself up on two pillows, and sometimes people do that because then gravity will then keep that fluid down to the bottom of the lungs and they can breathe a little more easily.

He also had swelling of his legs when he was on his feet for a long time, and that also is a symptom, except it's a symptom of right heart failure.

[176] And then, when I talked to him and I had his medical records, or some of his medical records which showed that he'd been hospitalized in July of 1995. He had been in heart failure at that time. He was found to have a valve of the heart that only had two parts to it, instead of the three that it ordinarily should have. If you can see up into the heart here (indicating), or even on the other side, the pulmonary artery, there are three sections to the valves. If there's only two sections, and you can imagine three sections put together can open more easily than two because they are tight across the opening itself. And so, whenever you find this it's called a bicuspid or two tooth valve, instead of a three tooth valve. It should be replaced, because it puts too much strain on the heart and allows the heart to fail; and indeed this is what he had done. And when he did his heart catheterization to find out what was wrong with his—why he was in heart failure, he found out that he also had some disuse to the arteries of the heart, the oxygen to the heart, coronary artery, so he also had heart disease. I should say coronary artery disease, or what will cause a heart attack and so they repaired that [177] at the same time. And then after his valve had caused the left side of his heart to get bigger and so he had that finding also. And then after he was operated on, his right lung collapsed and that had to be taken care of with a tube to suck the air out. He's not a smoking individual, he was overweight, he was 76 1/2 pounds over his ideal weight. When you listen to his heart you can hear—it makes a metal click. An artificial valve makes a metal click. You can hear that. He had a few little crackles at the right base of his lung, and they disappeared, but not completely, after he had given me a deep cough. And what this means is that he had a little bit of fluid in some of the small airways of the lung, and then when I checked his feet and his ankles and his legs, he had some swelling or fluid

that was in there. So all this indicated that indeed he does have congestive heart failure, he has a little bit of sign of congestive heart failure, although he is not in clinically overt congestive heart failure to the point where you say you got to go into the hospital and be treated for it.

Q I'm sorry, is there more that you'd like to comment on in your report?

[178] A No.

Q Did you have an opportunity to take a pulmonary function test, or battery of pulmonary function tests for Mr. Shirley?

A Yes. In Mr. Shirley, he had normal lung function as far as his spirometry is concerned. He does have in the lung volume study, he still—his total lung capacity is still above 80% of predicted, so that is normal for him. It could be higher except for his weight. That is reducing his total lung capacity somewhat because of the compression of his weight to the chest and his abdomen on his diaphragm and his chest wall. And he had reduction in diffusion capacity and that corrected all the way to normal when you consider the alveolar volume, and the reduction of diffusion capacity if he has fluid overload from congestive heart failure that will reduce his diffusion capacity. And the fact that it corrected when the alveolar volume was considered is an indication that he has no interference with oxygen, or diffusion.

Q Doctor, did you have a chest X-ray taken for Mr. Shirley at your office?

A Yes.

[179] Q Would you tell the jury what your findings were in reviewing Mr. Shirley's chest X-ray?

A Well, this is actually the one we looked at before, when I was using it as an example, and it showed that his breastbone was wired together from the heart surgery, that he had the artificial valve in his heart; and then, as I said these pleural stripes are considered to be fatty tissue that is lining the lung. The way you tell those from plaques is that they

extend from the top of the lung all the way along the side down and they don't become irregular like plaques do, or pleural plaques. They extend from the top of the lung all the way along the side down and they don't become irregular like plaques do; and so, it looked like it was from fatty tissues. And then he had these little reticular markings at the side of the right lung, and the right lung is where I heard the sounds at the base and where I think that he probably has some fluid overload, some very mild degree of a little bit of heart failure. Although you couldn't say that he really was in heart failure at the time.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether or [180] not Mr. Shirley has a pneumoconiosis, including asbestosis?

A Yes. He does not.

Q Do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Shirley may contract or may develop a pneumoconiosis, including asbestosis in the future?

A I believe that he will not.

Q Doctor, when you make that conclusion, is that based on our earlier discussion regarding dose, latency, profusion, or lack of profusion in this case?

A Yes.

Q Doctor, if Mr. Shirley had testified that he experienced great difficulty in going about his daily activities, is there anything in your examination of him to which you would attribute to a reasonable degree of medical certainty, as the cause of his difficulties?

A I believe there are two things that are contributing to that. Number one is his weight and number two is the fact that he's had a very serious heart operation. And I believe those two combined contribute to that.

Q Certainly though, in the lung testing [181] that you did you saw nothing to indicate that Mr. Shirley's pulmonary system isn't functioning at least very, very close to normal?

A That's correct.

Q So then do you agree, or do you have an opinion to a reasonable degree of medical certainty as to whether any problems with daily activities that Mr. Shirley may have complained of would be caused by any impairment in his respiratory system?

A Yes. They would not.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Shirley's life expectancy has been shortened in any way as a result of exposure to dust, while employed by the railroad?

A I believe it has not.

Q And if I've asked you this question, please correct me. Do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Shirley has a likelihood of developing a dust related disease in the future?

A I believe he does not.

Q Once again, back to the chart, we have a [182] reliable history of exposure and appropriate latency period. Did you find any chest X-ray evidence of S, T, or U, type of regular opacities?

A No, I did not.

Q Doctor, did you have more than one X-ray to review for Mr. Shirley?

A Yes.

Q How many did you have?

A There were seven, in addition to the one I had.

Q In your review of any of those chest X-rays, did you ever conclude to a reasonable degree of medical certainty that there were any findings, or anything showing on those x-rays that indicated that Mr. Shirley had a pneumoconiosis, or any findings consistent with a pneumoconiosis?

A Not when you considered all of the X-rays together

Q I believe you touched on that earlier. What you're saying, I believe, is that on some of the earlier X-rays there may have been findings that could have been interpreted as

consistent with a pneumoconiosis, but if you look at later X-rays those [183] findings had disappeared; is that correct?

A That's correct. On the July 1995, chest X-ray, if you had only that X-ray, then you could say that it would have been consistent with a pneumoconiosis. However, that was during a period of heart failure and then it disappeared later on.

Q Did Mr. Shirley have a restrictive pattern of lung impairment with an FVC below the lower limit of normal?

A No.

Q Did Mr. Shirley have a diffusing capacity below the lower limit of normal?

A No.

Q Did Mr. Shirley have a diffusing capacity below the lower limit of normal?

A Not when you consider the alveolar volume, no.

Q Did Mr. Shirley have a diffusing capacity below the lower limit of normal?

A Not when you consider the alveolar volume, no.

Q In your medical opinion, which is to a degree of reasonable medical certainty, do you believe [184] that it's necessary to correct for alveolar volume?

A Yes.

Q So then your question to answer number three would be that he did not have a diffusing capacity lower than normal?

A That's correct.

Q Did he have any late or pan inspiratory crackles at the posterior lung bases that are not cleared by cough?

A No. The key word being bilateral.

Q Would you please get your file for Mr. Butler. Did you follow the same examination protocol?

A Yes.

Q Would you please look at your report and tell the jury those things that you believe, or those things which you've found to be significant in making a diagnosis regarding

whether or not Mr. Butler has asbestosis, or mixed dust pneumoconiosis?

A I found that he had pneumonia on one occasion during childhood which sometimes leads to respiratory problems later on in life, that he had had high blood pressure since 1997, that his tobacco smoking history is rather minimal, he had ten pack years of [185] smoking. I found it important that he was—had had broken ribs, that he was overweight, that his weight was 56, almost 57 pounds over his ideal weight. And then I did the laboratory testing.

Q Did you, as part of your laboratory testing, did you take the pulmonary function test and lung volume, and diffusing capacity studies that we've discussed earlier?

A Yes. And then I did the laboratory testing.

Q As part of your laboratory test, did you take the pulmonary function and lung volume and diffusing capacity studies that we've discussed earlier? I believe that we may have used Mr. Butler for one of our earlier explanations, actually.

Did you note any reduction in diffusing capacity for Mr. Butler?

A No.

Q His diffusing capacity was at least or better than normal?

A Yes.

Q Did you note any obstructive or restrictive impairment in Mr. Butler?

[186] A No.

Q Was Mr. Butler's forced vital capacity within the predicted?

A Yes.

Q And his FEV1/FVC was within predicted values?

A Yes.

Q His total lung capacity was within the predicted values?

A Yes.
Q Do you find the 75% of predicted value for residual volume to be of significance?
A No, that's still within normal range.
Q You wouldn't look at residual volume by itself and ascertain whether someone did or didn't have a pneumoconiosis related breathing impairment, would you?
A No, because the residual volume would be reduced in a person who was overweight, but so would the total lung capacity. Usually, they're proportionately reduced, and this is fairly normal for the proportion, this 3.2.
Q Did you take a chest X-ray of Mr. Carl [187] Butler?
A Yes.
Q I'm showing you a blown-up copy of the ILO form that you completed following your chest X-ray of Mr. Butler?
A Yes.
Q Would you please tell the jury what, if any findings you saw, or you made regarding Mr. Butler's chest X-ray?
A Well, from the X-ray alone, I could not be certain whether it was just because he was overweight, or if he actually had pleural plaques. And so, I marked it giving him the benefit of the doubt. I marked it as if he did have pleural plaques. However, as a B-reader, what you're supposed to do is then explain it down here, and I said that he is obese. And some or all of the findings in 3C, that being this area here, could be fat tissue, rather than plaque: There is a bilateral pleural stripe, consistent with Adipost tissue, and the oblique views do not confirm the presence of plaques. A high resolution CT scan of the thorax should be obtained to resolve the question. I feel I couldn't resolve it just from the plain X-ray.
[188] Q You couldn't state to a reasonable degree of medical certainty that he did or didn't have either pleural plaque or Adipost tissue; is that correct?
A That's correct.

Q Did you see any other abnormalities, or possible abnormalities on Mr. Butler's chest X-ray?
A No.
Q Doctor, do you have an opinion as to a reasonable degree of medial certainty if Mr Butler does have pleural plaques, do you believe that his life expectancy would be affected in any way by those pleural plaques?
A Not from pleural plaques, no.
Q Doctor, do you have an opinion as to a reasonable degree of medical certainty as to whether Mr. Butler has asbestosis, or mixed dust pneumoconiosis?
A I believe he does not.
Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Butler has asbestosis, or mixed dust pneumoconiosis?
A Yes, I believe he does not.
Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether Mr. [189] Butler has asbestosis or mixed dust pneumoconiosis?
A Yes. I believe he does not.
Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Butler suffers from any condition known to you which might be life-threatening?
A No, he does not, except for being overweight. That will shorten his life span, but that's the only thing.
Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Butler will develop asbestosis in the future?
A I believe he will not.
Q Doctor, if Mr. Butler had complained that he is no longer able to carry on his daily activities like he could ten years ago, did you see anything or find anything in your examination or testing of Mr. Butler that would explain why he may no longer be able to proceed at the pace that he wants to?

A Well, Mr. Butler, was 66 when I examined him and his weight, of course, would—as I tell my patients, if I suddenly handed you 57 pounds today, and told you to carry this all day long, 24 hours a day, 7 [190] days a week, would you not feel as if you were tired out? Certainly, you would and you'd feel a bit more slowed down. And even though you gained the weight slowly doesn't make any difference, still it slows you down. And so, that would slow him down.

However, when I talked to him. Here's a man 66 years old, who is farming 108 acres, 34 beef cattle, a bull, a milk cow, 24 chickens, 2 dogs, 2 cats, grows hay for his cattle, for regular exercise he does calisthenics, range of motion exercises. That's pretty good for a 66 year old man. If I could get all my 66 year old patients to do all that much activity, I'd think they were doing pretty good. Now, I don't know what he did before that, maybe he farmed 216 acres and had 68 head of beef cattle, and so forth. Maybe that's what he means by slowing down, I don't know.

Q Doctor, do you have an opinion to a reasonable degree of medical certainty as to whether Mr. Butler's respiratory condition, or respiratory function contributes to any inability to carry out the daily activities of life?

A Yes, it does not.

MR. BAKER: I think that's all we have.

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TRIAL TRANSCRIPT
April 24, 1998

Renn Testimony

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[4] THE COURT: Go right ahead.

MR. BAKER: Yes, sir.

CROSS EXAMINATION

BY MR. RION:

Q: Good morning.

A: Good morning.

Q: Dr. Renn, I believe the day before yesterday we spent—you spent a couple of hours on direct talking about some general issues regarding asbestos; is that correct?

A: Yes.

Q: And then you spent some time talking about each individual gentleman involved in this case?

A: Yes.

Q: That's what I—I think I'm going to follow the same procedure this morning. I'm going to spend a little time with you talking about some general considerations, and then we'll go to the individuals.

The one thing that we discussed, both in your testimony and with Dr. Gaziano, was the criteria that a clinician like you would use in diagnosing asbestosis, and when I say a clinician, is it your understanding that would mean someone who uses x-rays and breathing [5] tests as opposed to a pathologist who might actually look at lung tissue?

A: Yes.

Q. Now, the criteria that was shown to everyone on your direct examination is just a summary of some criteria that appeared in the American Thoracic Society's 1986 paper on diagnosis of nonmalignant asbestos diseases?

A: Yes, that's correct.

Q: Can you see this from the way I've got it set up (indicating)?

A: Yes.

Q: I tried to sit it where everybody, including you, can see it. Maybe if I come down in here (indicating). Now, if we read along it says—or actually, it doesn't say up here (indicating), but, up here it says (indicating)—above this it would say, "It is necessary to have one and two." Do you recall that language?

A: That's correct.

Q: And that means if you're not exposed—necessary means you've got to have it, correct?

A: Yes.

Q: You've got to have the exposure and [6] you've got to have the latency, or else you can't have the disease?

A: That's correct.

Q: Then it goes on to way, "We regard the following a recognized value," and there are four areas listed here, chest x-ray, restriction on breathing test, diffusing capacity, and rales, which can sometimes be heard on physical exam, correct?

A: That's correct.

Q: Now, would you agree with me that this is not a—there's no formula for making this diagnosis, that what the clinician does is look, after you get past the exposure and latency, the clinician looks at each one of these findings and then exercises his clinical judgement to determine if asbestosis is present?

A: That's correct.

Q: So, it's not like you—you wouldn't say that you have to have—there's no formula where you can say you've got to have Number 1 and 3, you certainly don't have to have one, two, three and four to make the diagnosis, do you agree with that?

A: I agree with that. The only thing that, if you have all four it makes you more certain.

[7] Q: Right, and for example, we know that these are clinical tools as opposed to pathological tools, correct?

A: Yes.

Q: And, we know that asbestosis, in almost every case, will first exist, will it not, pathologically in the lung, and in the early stages it may exist in the lung but not be detectable, at all, by any of these tools, is that correct, early on?

A: That is correct.

Q: And, then, as times passes, the fibrosis may—I'm going down but really I may become more evident and eventually, at some point, it becomes clinically detectable, at least in some instances, correct?

A: Yes, and I use the analogy of pregnancy. In the early stage it is simply one egg and the sperm that found that egg, and then that egg divides into two cells, and then four cells, and some time it becomes clinically detectable, but before that it is not clinically detectable.

Q: And as it becomes clinically detectable, depending on the individual, different ones of these clinical tools may register a positive finding [8] first, depending on the individual?

A: They may register a positive finding. However, they're not—they don't have enough discriminatory power to be able to say that this is really caused by a specific disease process.

Q: With that explanation, though, you'd agree with me that as a person progresses from the pathological to the clinically detectable level, different ones of these may become positive first, depending on the individual?

A: That's correct.

Q: And, for example, you'd agree that asbestosis—

A: Excuse me, that's correct, with the exception of the crackles.

Q: Tends to be later?

A: The crackles come later.

Q: . Yes, sir. You agree with me that in some instances a person's asbestosis will progress to the point that it shows up on the chest x-ray, but he might not have any measurable impairment?

A: That's correct.

Q: So that person might have scarring that we can detect by x-ray but not have any impairment, and [9] he may not even have any symptoms?

A: That also is correct.

Q: So you can have the disease in it's early stage and have no symptoms at all?

A: Yes.

Q: Now, in other cases, and I think you'd agree with me, that the first noticeable change in some cases is an abnormality in gas exchange?

A: That's true. However, the abnormality is usually more evident as you're doing an exercise test with blood gases. The diffusing capacity has too much error and deviation from laboratory to laboratory to be that selective or discriminative.

Q: Yes, sir. The diffusing capacity is an indirect measure of the lung and gas exchange table, though?

A: That's correct.

Q: And you'd agree with me, although you would prefer an exercise test, that in some situations, not all situations, but in some situations you may have an individual with asbestos exposure and a latency who may have no chest x-ray changes, no restrictions, no rales, but who might have a gas exchange abnormality that you're able to pick up with the more sophisticated [10] tool of an exercise test, and that person may have asbestosis?

A: Well, that's true, but you also have to be certain that you are eliminating other compounding factors.

Q: Yes, sir, absolutely.

A: The other reasons for an exercise induced type test.

Q: Absolutely, but you'd agree that under some circumstances, if the clinician, after considering all that, in his professional judgement, may make a diagnosis of asbestos, but not in every case, but in certain cases where the only abnormalities are a history of exposure, latency, and some indication, not of diffusion but of gas exchange abnormality, that under certain situations can be appropriate?

A: It could be but it'd be very unusual without the x-ray.

Q: But you'd agree it can happen?

A: It'd be very unusual but it could happen.

Q: And that person may have normal x-ray, no restriction, and no rales?

A: That's correct.

[11] Q: Okay, and in other individuals, as we discussed, might have the history, the latency, and may have nothing but chest x-ray with no measurable impairment?

A: That's correct.

Q: So, again, I'm not trying to—this is general information that we're just covering here, that you'd agree under certain circumstances an individual might have—he might have the history of exposure, he might have latency, he might have chest x-ray, and he might have diffusion and rales, and not have restriction?

A: That, too, would be very unusual by the time he progressed to rales or crackles.

Q: Yes, sir, but let's say, well, he might have the x-ray, the history, and diffusion—x-ray—the history, x-ray and diffusion, for example?

A: That could be true.

Q: Yes, sir, okay. Although, certainly, diagnosis of asbestosis is possible without chest x-ray changes, the x-ray is a very important tool?

A: Yes, it is.

Q: And, I think the ATS statement says that you really need to be careful about diagnosing it [12] without the x-ray, unless you've got lung tissue?

A: That's correct.

Q: So,—and I think you indicated on your direct examination, although the ATS suggests the 1/1 chest x-ray, a 1/0 chest x-ray is, first of all, considered abnormal?

A: Yes.

Q: And under appropriate circumstances can—you can make a diagnosis of asbestosis with a 1/0 chest x-ray?

A: That's correct.

Q: Let's talk a little bit about pulmonary function testing, and I think you indicated that there are different—that when you're looking at whether someone is normal or abnormal in pulmonary function tests, what you do is you compare their score to tables that exist that provide what someone of a certain age should score to be normal?

A: That's correct.

Q: And, they don't have to—in order abnormal—they're not abnormal just because they're—just if normal's one hundred, scoring ninety-nine wouldn't necessarily—wouldn't be abnormal?

A: No.

[13] Q: You've got to be significantly below the predicted normal to be abnormal?

A: That's correct.

Q: And, the way they do the tables, Doctor, don't they do chest—whoever does the tables should do chest of healthy people and see how they score to set some norms?

A: That's correct.

Q: And, roughly speaking, the ninety-five percent of the studied population should fall within the normal range and five percent in the abnormal range?

A: Well, you're—what you're doing in the testing of these normal people—

Q: Yes, sir.

A: —is that you're looking at this—these normal—let's say you look at one hundred people and they are all normal by every method that you can possibly determine, they're x-

rays are normal, they have no history of lung disease, they've never smoked, they haven't worked in an occupation where they might get a disease, they're not overweight, et cetera. And after you determine that they're normal, then you take the test that you want to determine the normal predicted valued score and you administer that test to them, and [14] then use that for your comparison with people who are being tested to find out whether or not they are abnormal.

Out of that one hundred people that are normal by every other method, the test that you are trying to determine the predicted values for, there will be five percent of them that will fall outside of that and look abnormal when in reality they aren't, and that is with a number of tests. It's called the ninety-five percent confidence interval.

In other words, you can be ninety-five percent certain that if someone falls inside those numbers that you determine, then those people are definitely normal.

Q: So, you'd agree—I think your explanation—you explained in detail what they did, but I believe you would agree that the subject population that forms the basis of the predicted normals, ninety-five percent of that population will fall within the normal range and five percent within the abnormal range, roughly speaking?

A: That's correct.

Q: Now, we've had a little discussion about that, depending on which table you use for a particular pulmonary function test, whether it be for [15] vital capacity or diffusion capacity, a person may be rated as normal or abnormal, depending on which table you use to predict where he should be based on his age?

A: That's correct.

Q: You can have, on any of these predicted normal tables, you can have, can't you, Dr. Renn, people who we know have had significant loss of lung volume, for instance, through surgery, who, nonetheless, score normal on the

tables, although they may not be normal for them because we know they've had some lung removed?

A: That's correct.

Q: So you could have, for instance, I think we have, tell me if I'm wrong, the right-hand side where there's no heart, there's three lobes?

A: Yes.

Q: And on the left-hand side where there's your heart, you have two lobes of lung?

A: Yes.

Q: And you might have one lobe removed, surgically, on the right-hand side because of cancer or some other problem and take a pulmonary function test and still score as normal with no impairment?

A: That's correct.

Q: That's just an inherent limitation of [16] the tables?

A: Well, it's not a limitation of table so much as it is, when you remove part of the lung, surgically, the other parts of the lung will expand to fill up that space, and so, it's really a function, also, of that.

Q: But it's in part due to just the fact that we're dealing with predictions and populations rather than individuals, so, you can even have two lobes removed and still score normal, couldn't you?

A: Yes.

Q: And that would be significant loss of lung volume?

A: That's correct.

Q: From a pathological standpoint. I wanted to discuss this issue with you a minute, Doctor, and I've got a—can we have that Joe Provilla report?

And let me ask you, I doubt that you're going to be able to remember this, but, Doctor, there've been people that have run through your lab, for instance, and who've done pulmonary function tests, x-ray, and all the workup you've described here, who've scored completely normal on everything, you know, if we looked at the—we looked at

the—had a history of exposure, had [17] appropriate time interval, who might have a negative—no chest x-ray, no restriction, no diffusion and no rales, who we know have asbestosis because they've had surgery and there's been a biopsy that proves it to us, I mean, can you recall that that has happened in some instances?

A: That's correct.

Q: Yes, sir, and so, in those instances, for example, if we had, and again, I'm not trying to be unfair to you and tax your memory unduly, but you might even have had an individual that the reason we know he has asbestosis is he's had cancer, and he's had a section of his lung removed, yet all the clinical tests that you've run—don't get me wrong, I'm not inferring there's anything wrong with it, it's just a function of how this works, all the clinical tests that you run were normal but we know, Number 1, both the person has asbestosis and he's lost some lung volume because he's had surgery, can you recall that that's probably happened in some of these cases you and I've been involved in?

A: It has happened, and those are the examples of the people that have asbestosis before it's clinically detected.

[18] Q: Yes, sir, and they also even have—but they also even have some of their lung removed, and even that's not clinically detected?

A: That's correct.

Q: Now, in some of these gentlemen we have a finding of obstructive lung disease, which is something I think you and Dr. Gaziano both agree, where you see obstructive lung disease, the most common cause is cigarette smoking?

A: That's correct.

Q: And I think you and Dr. Gaziano have agreed in almost all these cases, I won't—they may be an exception, but in almost all of them, that where there's obstruction it's caused by cigarette smoking, at least in part, in these individuals, and in your opinion in whole, correct?

A: Yes, sir.

Q: Now, generally, when we think of asbestosis we think it may, on the one hand, it might cause a diminution in the diffusing capacity that we've discussed here, but it does not cause obstructive lung disease, generally, it's not regarded as causing obstructive lung disease?

A: That's correct.

[19] Q: On the other hand, you'd agree that there are researchers who believe that various types of inhalable dust, generally, not asbestos specifically, can cause or contribute to obstructive lung disease?

A: There are some dusts that can do that, yes.

Q: Do you agree that either coal or silica can contribute to obstructive lung disease?

A: Yes.

Q: I want to talk for a minute to you about what it—what the disease, asbestosis, means, and I think we've covered that you can have it originally with no shortness of breath at all?

A: That's correct.

Q: And would you agree that if a person begins to develop symptoms from asbestosis, the most common symptom would be shortness of breath?

A: That's correct.

Q: It's, in fact, some authors and researchers have said that it's one of these diseases that really almost has only one symptom?

A: That's true. As it becomes more advanced they develop a nonproductive cough, or a little hacking cough, possibly, as it becomes more advanced.

[20] Q: Yes, sir, but the primary and in some researchers, practically only significant symptom is shortness of breath?

A: That's true.

Q: Now, I want to talk to you a little bit, and if shortness of breath from asbestosis does progress you'd agree that it tends to be a very slow process?

A: Yes.

Q: It's not something that happened overnight or even over a period of a couple of months?

A: That's correct, because asbestosis doesn't progress very rapidly.

Q: It sort of, if it gets worse it's more likely to creep up on you than to get you suddenly?

A: That's correct.

Q: Now, on this issue of progression, uld you agree with me that asbestosis is normally a progressive disease?

A: If it is present it will progress, and it depends upon the dose that is present.

Q: Yes, sir.

A: It depends upon the time that it's been in relation to the tissue, but depending upon that, [21] those two factors, and it also depends upon the fiber type—

Q: Yes, sir.

A: —as to whether or not there is significant progression.

Q: But you'd agree, like, if you're teaching a group of medical students some of the primary features of asbestosis, you would probably put that it's generally a progressive disease, as part of the teachings you would give to somebody on the disease?

A: Well, if you say it's generally progressive, that would have to mean that it was progressive in all people, or at least greater than fifty percent of them, and that's not the percentages that I'm familiar with. The percentages are less than fifty percent.

Q: Would you agree it's normally a progressive disease?

A: Well, with that definition I can't agree that it's normally progressive.

Q: You can not?

A: Not if it doesn't exceed over half of the people.

Q: Yes, sir. I wanted to just—could we [22] look at Dr. Renn's testimony? You and I've discussed this issue, I believe, in a case called *Filmian versus Owens Corning*

Fiberglass, on October 27, 1989, and I just wanted to show you what we have.

If you could look with me, I asked you on Page 39, this was in '89, I think it was at your office up in Morgantown, I came up and talked to you, could you put the question and answer on the screen, and I think I asked you, "Doctor, I take it from what you said earlier that you believe asbestosis is normally a progressive disease," and your answer there was, "Yes," wasn't it?

A: That's correct. May I see that?

Q: Yes, sir. Yes, sir. Take a look at that. I don't want to try to get overly involved in semantics. Doctor, I think you and I can agree, asbestosis, in many cases, can be progressive, and it's very difficult to predict if and to the extent it will progress, is that something you and I can agree on?

A: Well, that's correct, but if we go back here in this deposition to the previous page—

Q: Yes, sir.

A: —we're talking about a person who retired with no evidence of asbestosis.

Q: Uh-huh.

[23] A: And a later time when the scaring become significant, and my answer was, then, "If he has at the time of his retirement over the period that he was exposed, he has then developed some dust spur. That dust spur is still present within the lung."

"The clearance mechanisms, or the normal clearance mechanisms of the lung have not been able to sweep the lung clean of the asbestos fibers. They then are reacted to by the body and whatever the body reaction is, then, to them, it will develop and progress over a period of years until it comes to the point where we can clinically detect the impairment and gas exchange, and the increase in elasticity."

Q: Uh-huh.

A: I should've said decrease in elasticity.

Q: Yes, sir. So what we're talking about there that, if I recall, and I was looking at that the other day, we were talking about there that if you have a person who he might, and you might want to refer back to the transcript previous page, we're talking about if he may work for, we'll just put decades, I believe this is what we're talking about and you tell me if I'm right, and he might retire, and when he retires, not [24] have detectable asbestosis, wasn't that what we were talking about there?

A: That's correct.

Q: All right. No asbestosis that we can see on check asbestosis. Yet, it could be sometime after his retirement he might come to the clinic and we detect it, right, isn't that what we were talking about?

A: That's correct.

Q: So, later he's asbestosis detected, sometime after retirement, and you agree that that can happen, didn't you, Number 1?

A: Yes, that can happen.

Q: And, then, after—go ahead, I'm sorry. I didn't mean to interrupt you.

A: In fact, the next question that was on—started on Page 38—

Q: Yes, sir.

A: —the question was, "So what you're saying is that the scarring may have been there when he retired but he hadn't progressed to a point where you can clinically detect it sometime after retirement?"

Q: Absolutely.

A: And the answer that I gave was, "It may not even have been there at the time of retirement. It [25] may only be that he had the dust burden at the time of retirement."

Q: Uh-huh.

A: "And it also may be that he is one of those susceptible individuals who would have dust burden and would then go

on and develop asbestosis. There are other individuals who have the dust burden and may not have that same susceptibility, and go on and develop—excuse me, and go on and develop the disease asbestosis."

Q: All right. So, with going through all that, and if we take an individual who's worked for decades and when he retires has no asbestosis, but he's got some dust in his lung?

A: Yes.

Q: And then later he develops asbestosis, after retirement, Number 1, you agree that can happen?

A: That can happen.

Q: And in the context of that discussion you did state that such disease, and it's the word you use and I don't want to—you did use the words, is normally progressive, within the confines of that discussion?

A: Within the confines of that discussion, [26] yes.

Q: Okay.

A: But when you use the word generally—

Q: Yes, sir.

A: —it's not generally because it's less than fifty percent.

Q: Yes, sir. Just in the confines of this discussion you'd agree normally progressive, my next question was to go through this that you'd discover for us. Thank you, ma'am. The—I wanted to just ask you a little question about a quote that OSHA said about asbestos and just ask you if you agree or disagree with—can I have a copy for Dr. Renn?

No, I'm sorry, I missed—'m wrong, you gave me what I needed and I'm confused on where I should be in my notes, I apologize to you and I apologize to these folks for getting mixed up here.

Now, you'd agree, would you, Dr. Renn, that as asbestosis progresses it can be fatal but is not necessarily in every case?

A: Sorry, I didn't hear the last part of your question.

Q: Would you agree that as asbestosis does progress it can be fatal but it is not necessarily fatal [27] in every case, is that a fair statement?

A: That's correct.

Q: Do you think it's fair to say that you would generally—

MR. ADKINS: I'm sorry, excuse me for a minute, what do you have on the screen over there?

MR. RION: Nothing right now, I don't think. I'm confusing everybody, I'm sorry.

BY MR. RION:

Q: Now, you would agree, would you not, that if we're just dealing with averages, that generally you would expect some loss of life expectancy with asbestosis?

A: Yes.

Q: Now, could I have the OSHA 22615 pages? Now, I wanted to ask you something about that OSHA. This is a—OSHA had held some hearings in 1986 on some regulations on asbestos, and let me just read him some of the statements they made and see if you agree that generally this is an accurate statement, that under health effects overview it says, "OSHA is aware of no instance in which exposure to a toxic substance has more clearly demonstrated detrimental health effects on humans that has asbestos exposure."

[28] "The diseases caused by asbestos exposure are life threatening or disabling. Among these diseases are lung cancer, cancer of the mesothelia lining of the pleura, and peritoneum gas asbestosis and gastrointestinal cancer."

"Of all the diseases caused by asbestos, lung cancer constitutes the greatest health risk for American Asbestos Worker. Lung cancer has been responsible for more than half of the excess mortality from asbestos exposure in some occupational cohorts."

Now, there's a lot of statements in here, I'm not going to try to ask you if you agree with this thing as a whole because there might be—let me ask, do you agree that the diseases caused by asbestos exposure, it says here are, and what did we just say, can be life threatening or disabling, fair enough?,

A: Yes.

Q: All right. It says, "Among these diseases are lung cancer, and I think you'd agree with that with a caveat—you'd believe asbestosis has to be necessary before lung cancer is a problem?

A: That's correct.

Q: Cancer of the mesothelia-lining of the pleura, you'd agree with that?

[29] A: Yes.

Q: And, peritoneum, you'd agree with that?

A: Yes.

Q: And asbestosis?

A: Yes.

Q: And you might not agree with them on gastrointestinal cancer?

A: That's correct.

Q: All right. You don't have to have asbestosis to get the mesothelioma, though, is that correct?

A: That is correct.

Q: In fact, it's one of them unfortunate things about asbestos exposure is that mesothelioma is probably the most serious—most serious disease and the one most likely to be fatal of all the asbestos diseases?

A: That's correct.

Q: But, yet, it takes less exposure to cause that than any of the others?

A: That's correct.

Q: In fact, it's even been reported in family members whose only exposure is washing the clothes of workers who had occupational exposure?

[30] A: That's correct.

Q: Now, it says here, of all the diseases caused by asbestosis, lung cancer constitutes the greatest health risk for American workers, it says lung cancer has been responsible for more than half of the excess mortality from asbestos exposure in some occupational cohorts. Now, if I add that those occupational cohorts include workers who, Number 1, had asbestosis, and Number 2, who were smokers, to be fair about this, you'd agree that that's an accurate statement, if we're talking about asbestotic smokers?

A: Yes.

Q: Okay. Now, if we're talking about people just—let's back up a minute about people who just smoke cigarettes who are not asbestos workers, then the lung cancer risk, and that's a pretty substantial lung cancer risk just from smoking?

A: Yes.

Q: And I think it's somewhere around ten percent on the average?

A: And, a little bit higher in some series.

Q: Ten to fifteen percent?

A: Yeah, that'd be fair.

[31] Q: From smoking alone?

A: Yes.

Q: So, if we want to—if we want to take a look at cancer risks in, let's talk a minute about asbestosis patients, if we tried to set up a little chart here, if we took—let's take mesothelioma and lung cancer, and we'll put total over here (indicating), and we're going to put asbestosis, let's put asbestosis patients, smoke, I'm going to put asbestosis who don't smoke, and then I'm just going to put smokers, no asbestos, and nonsmokers, no asbestos.

If we kind of move across here, the rates reported of mesothelioma among asbestosis patients, would you agree, one in the eight to ten percent range, or do you remember?

A: Well, the problem with the mesothelioma is that most of the patients that develop mesothelioma have not developed asbestosis.

Q: Uh-huh.

A: And so it's generally asbestos exposure and not asbestotics, per se.

Q: There's a couple of mortality studies, Doctor, on workers that we've talked about in this case, on workers diagnosed by pneumoconiosis panel with [32] asbestosis, we've got a couple here from—one from—you're familiar, I'm sure, with Dr. Raymond Parks?

A: Yes.

Q: And Dr. Couts from Britain, and then another one from Dr. Berry, again, a British study. Just taking a quick look at these, would you agree that they reported, I think, both of them, of the mortality of the people they looked at, of the deaths, somewhere around ten percent were from mesothelioma in these two cohorts?

A: Yes, nine and ten percent.

Q: All right, and that, assuming these studies are right, the mesothelioma risk does not vary depending on smoking history, smoking's not a contributing factor to mesothelioma?

A: That's correct.

Q: Okay.

A: Neither is asbestosis.

Q So,—

A: I don't think you can put in your chart, it's not asbestosis.

Q: Well, those studies there involve asbestosis patients, do they not?

A: Yes.

[33] Q: I'm going to put a star here and put reported—reported by Couts and Berry. I think the point you're making, I believe, Doctor, is that the rates that is, in your opinion, is not really the asbestosis that puts them at risk for mesothelioma, it's the fact that they've been exposed?

A: That's the point.

Q: That's the point you're making, okay. Well, with that caveat by putting reported by Couts and Berry, do you have any problem with me putting nine to ten in here?

A: No.

Q: Okay. Now, the big difference, and that's going to be smokers and nonsmokers, there shouldn't be any difference by smoking history?

A: That's correct.

Q: The big difference you're going to get is going to be when you get to lung cancer, because they report for their smokers—these are smokers and I'll represent to you that maybe not all, but almost all of these folks in these studies smoke, so I don't want to mislead you or anybody else, but among these cohorts, they report thirty-nine to forty percent for lung cancer?

[34] A: Yeah, they say thirty-nine percent, both of them.

Q: Okay. So, if you're—according to their cohorts, the folks that smoked and exposed to asbestos and have asbestosis, it's just like the OSHA, the OSHA said some of them are over fifty percent, these come out a little under fifty percent, for the smokers?

A: Yes.

Q: Around—actually they come, say, forty-eight. Now, on the other hand, if you never smoked your lung cancer risk from asbestos is dramatically lower, and in some peoples' opinion, eliminated?

A: That's correct.

Q: Yeah. Which do you—do you believe it's eliminated or do you believe it's dramatically lowered?

A: From exposure alone?

Q: No, from asbestosis?

A: No, I don't believe it's eliminated from asbestosis.

Q: Dr. Gaziano, I think, said somewhere around two-and-a-half percent, does that sound reasonable?

[35] A: That's correct.

Q: So you're still, if you add up the total risk, it's—the major risk of the nonsmoker is going to be mesothelioma as opposed to lung cancer?

A: That's correct.

Q: All right. So, and that'll be around eleven-and-a-half, total, if you take in lung cancer and mesothelioma?

A: Yes.

Q: Now, if you look down to smokers, no asbestos exposure, you're mesothelioma risk is going to be nil to zero?

A: Yeah, it's very rare.

Q: So, just—would you fair enough put point, something like this (indicating) ?

A: Yes.

Q: I mean, very near zero, and then lung cancer we're going to say ten to fifteen percent?

A: Yes.

Q: And then on these it's going to be less than one percent for both, right?

A: Yes.

Q: So, if we compare—kind of, if we compare smokers and smokers, the asbestosic patients are [36] going to have a lot higher risk than the folks who just smoke?

A: That's correct.

Q: And if we compare nonsmokers to smokers—excuse me, nonsmokers who have asbestosis to people who've got not smoking and no asbestos, again, the asbestosic population's going to have a lot higher risk?

A: Yes.

Q: Although, in an individual we're going to be unable to say any individual, with reasonable certainty, is going to get cancer?

A: That's correct.

Q: And that's what Dr. Gaziano said, he said he just couldn't say, and you'd agree with that?

A: Yes.

Q: I'm going to ask you some questions about tobacco. I'll assume that as a pulmonary doctor you're very much against smoking?

A: Yes, indeed.

Q: I think Dr. Gaziano said he's done a lot in this community to campaign against smoking. I assume you've taken some measures up in your community to do the same?

A: Yes.

[37] Q: You'd agree that one of the problems with tobacco and nicotine is that it is an addictive drug?

A: Yes, it is.

Q: And, some people can quit smoking?

A: That's correct. Some, yeah.

Q: And some cannot?

A: And some cannot.

Q: In fact, I believe you'd agree on the—when we talk about addictive drugs, it's right up there with, as far as difficulty in quittingness, right up there with heroine and cocaine or the works?

A: Well, I've never had to quit any of them, so, I don't know.

Q: I understand that. I mean, but what you know—not from what you know—you've never smoked either, I bet?

A: That's correct.

Q: But, from what you know as a scientist and doctor is what I meant here?

A: Yes.

Q: Okay, that was my—I wasn't meaning to infer that you smoked or done any of that. If we go back to our individual who worked for decades, retired [38] and had no asbestosis, and then it becomes detectable, and let's say he had exposure over decades doing different kinds of work, but most of it with pipe and boiler insulation we've been shown—you know what I mean when I say pipe and boiler insulation?

A: Yes.

Q: Everybody else does by now, too, but assuming someone's been exposed by environment to pipe and boiler insulation over decades, then they come to the clinic long after retirement and you diagnose asbestosis, would you agree that the entire burden of fibers breathed in over the career would all add to the fiber burden that ultimately results in the disease that's diagnosed?

A: Well, that would be true, but it would depend upon the length of time after retirement before it showed up, because, let's say there was a year after retirement and he had exposure in the previous year, that's too short a latency period for those fibers to have done anything.

Q: All right, let me—that's a good point. Let me be a little more concrete, if we take a guy whose exposure is say, nineteen—thirty to 1970, and he shows up in the clinic—and I'm just going to [39] pick a date, 1990, you'd agree that the cumulative exposures over these decades were all to the extent they were exposures, all contribute to what we end up with here in 1990, with the caveat that, you know, an exposure of two months would contribute less than an exposure of two years, I mean, from—we'd include that common sense qualification, would you agree?

A: Yes.

Q: Okay. Now, I'm moving toward trying to work into our individual cases, and I wanted to see if we could summarize a couple of what I perceive to be the differences between your results and Dr. Gaziano's and see if you could agree with me that two of, maybe not the only but, two of the major differences in your workups and his are obviously, you guys read the x-rays different?

A: Yes.

Q: And, then, second, you have different results on many of the individuals on diffusion capacities specifically because of the difference in predictive tables that you each use?

A: That's correct.

Q: Would you agree that we're talking about the same issue over and over on some of these [40] guys, those are initiatives that you might talk about in general to save time, particularly the diffusing capacity?

A: Yes.

Q: Okay. Now, on the diffusing capacity, I think, Dr. Gaziano uses Crapo and Morris, correct?

A: That's correct.

Q: And you use another table that gives different predictives?

A: Yes.

Q: And because of the difference in the predictives some of these folks under Dr. Gaziano's analysis and tables, might be abnormal, and under your analysis and tables might be normal?

A: That's correct.

Q: And it's not that—and he said that—he made statement [sic] in this courtroom he didn't think there was anything wrong with what you done in using your tables, would you agree the same with him?

A: I don't think there's anything wrong with the way his tables, the problem is the way he interprets them (inaudible) being that was set up by Crapo and Morris when they published their paper.

Q: Now, Dr. Crapo, who developed these [41] tables, is a respected scientist?

A: Yes, he is.

Q: And, these tables have been used very widely?

A: They are used widely, yes.

Q: Would you agree that they probably are more widely used than the one's you're now using?

A: I would say that they're more widely used. However, the reason that they're more widely used, again, is because a lot of the software companies, the equipment companies that sell the machines, give those standards with the machines that they give out.

Now, if you know what you're going to use as a prediction equation in your office, or in your hospital, or wherever the laboratory is, then you can have the software written by the company to give those prediction equations, and, in fact, in our laboratory, we use different sets of prediction equations because it's required by different entities to use those prediction equations that they want used for the testing procedure.

Q: Does some of them require Crapo and Morris?

A: Yes.

Q: So, depending on who requests, you may, [42] in fact, in some cases use Crapo and Morris?

A: That's correct.

Q: And, Dr. Crapo is a fairly renowned scientist in this area, is he not?

A: Yes, indeed.

Q: Now, the—you reference the 1986 American Thoracic Society paper on how to diagnose asbestosis?

A: Yes.

Q: And, in the same year the American Thoracic Society did a paper on how to evaluate permanent impairment?

A: Yes.

Q: And in that paper, did they not recommend Crapo and Morris for diffusing capacity?

A: I don't recall what they recommended in that particular paper.

Q: I think if you look, it's the American Thoracic Society Evaluation of Impairment Secondary to Respiratory—Evaluation of Impairment Disability Secondary to Respiratory Disorder, and didn't they—let me just refresh your recollection, on Page 1206, talking about the diffusion capacity, just take a quick look there a minute, I know you can't possibly memorize [43] all these papers, but didn't they say the regression equations of Crapo and Morris are recommended?

A: That's what they said in here.

Q: Yes, sir, and let's just—I may be confused on this, but when you look at these impairment tables that rate people on impairment, you're really looking at ability—usually they're really more designed for trying to measure ability to do work, that type of thing?

A: Yes.

Q: And, at least in the impairment tables, to the extent they have DLCO on there, you do look at the DLCO single breath rather than corrected when you're doing impairment ratings?

A: That's what you're—well, they just say look at the diffusing capacity, they don't say whether or not it should be the DL/BA or not.

Q: Yes, sir. That's left to the—well, you agree with me, just as an example, if we take the same—the person we're talking about who's, let's say, had a whole lung removed and only got one lung, if you adjust their DLCO for alveolar volume, it could very possibly be normal?

A: That's correct.

[44] Q: On the other hand, their DLCO uncorrected single breath would likely show some abnormality?

A: That's correct.

Q: The—don't the—are you familiar that the West Virginia—this case is legally—is an FELA case because there's no Worker's Comp. for railroad worker's, you understand that, generally, that this is—

A: I don't even know what—

Q: Yes, sir.

A: —it stands for.

Q: Well, I'm not trying to confuse this with a Worker's Comp. case. Would you agree with me that the West Virginia Worker's Comp. Board, when they send people to be evaluated at St. Francis for when they want pulmonary function tests, they use Crapo and Morris?

A: That's correct.

Q: And that includes—even, that includes all the workers, too, in their settings, they still use Crapo and Morris?

A: That's correct.

Q: And I think the American Medical [45] Association Guidelines for Permanent Impairment also have published in their regression equations of Crapo and Morris for DLCO?

A: Well, that's true, but only if the laboratory that's doing the testing is doing the testing according to the American Thoracic Society recommendations for testing?

Q: Yes, sir.

A: If they're not doing the American Thoracic Society recommendations for testing and they recommend that the laboratory establish the prediction equation, the one that best fits the population they're testing.

Q: You're talking about some time in the, oh gosh, in the—at some point the American Thoracic Society came out in the paper saying, you know, look, you need to do what you-all did, run some people through your laboratory and see how it fits?

A: Well, that was done by Dr. Crapo several times, because he actually chairs the committee. He never recommended his own prediction equation.

Q: He said you need to run people through your lab to see what works?

A: That's exactly right.

[46] Q: And that—

A: He said that many times, in many editorials, and many papers, which, if you're interested I brought them with me, and I can—

Q: No, I think that's something we agree on, that they made that recommendation, in fact, you know Dr. Gaziano's partner, Dr.—not partner but the gentleman who shares the office and pulmonary function lab with Dr. Gaziano, Dr. Zaldivar?

A: Dr. George Zaldivar.

Q: And Dr. Zaldivar does examinations for the defense in asbestos cases?

A: I don't know who he does examinations for.

Q: Yeah.

A: I just know he does examinations.

Q: Dr. Gaziano testified that he and Dr. Zaldivar did what the ATS told him to do, which is run people through the lab and see if they fit the normal for people around here. I mean, that doesn't surprise you that they did that, also, does it?

A: Well, I've never talked to Dr. Zaldivar, so I don't know if he did or not.

Q: Yeah. Well, Dr. Gaziano testified they [47] did the same thing that you did?

A: I don't know. I don't know. I guess, if he says he did, he says they did.

Q: And so I asked him, "So you and Dr. Zaldivar ran people through your lab using Crapo and Morris or some other paper actually perfected this ninety-five percent," and his answer was, "Yes, sir." So, I mean, it sounds like he did the same type of things you did.

A: Does he say how many people?

Q: It says several. I don't know. He didn't give the number.

A: Because they're very specific, the American Thoracic Society's very specific about the number that has to be done.

Q: Yes, sir. Well, it appears they made some attempt, from his testimony, to not just use Crapo and Morris, but to run some people through there and see how it fit?

A: Well, they made an attempt, but they didn't make a valid attempt.

Q: Nonetheless, the West Virginia Comp. Board still uses Crapo and Morris?

A: That's correct.

[48] Q: And if you look in the ATS or AMA Guidelines Crapo and Morris is in there?

A: Unless you're not using the ATS recommendation for these standard tests.

Q: Yes, sir. So, I mean, the—the whole point I'm making is Crapo and Morris is not out of the mainstream?

A: Well, if we look at Dr. Crapo's paper where the guidelines were established—the predicted equations were established in the paper in 1981.

Q: Uh-huh.

A: The first paragraph under discussion reads, "The DLCO and DL/VA predicted by our regression equations were higher than other reported values for men and were among the higher reported values for women." So, it's not mainstream or midline, they are the highest predicted equations of all in the United States?

Q: Yes, sir.

A: Or throughout the world for that matter. So, are they correct at being the highest, is everyone else wrong, I don't know if they're correct or not, but no one who is reasonable, and this includes Dr. Crapo, because he chairs the ATS committee on the diffusing capacity, no one who's reasonable knows for [49] certain who is correct.

Q: But if we look into the ATS's most recent statement on the guidelines they say they—they don't just print Crapo and Morris, they say it's recommended?

A: Well, you say the most recent?

Q: The most recent paper they done on evaluation of impairment disability secondary to respiratory disorders?

A: Well, but that paper is in 1986 and the American Thoracic Society has an official statement that's been published since then, Mild Impairment, plus they published an official statement on the single breath carbon monoxide—

Q: Yes.

A: —diffusing capacity, which was in 199—excuse me, 1995.

Q: And that's the one that says you need to run people through the lab?

A: That's correct.

Q: Okay, but as far as the one that's secondary as far as the statement on evaluation of impairment secondary to respiratory disorders, this is their latest consensus paper on that issue?

[50] A: Yes, it is, but most disregard that now because of the later statements that have been made.

Q: But it says the regression equations of Crapo and Morris are recommended?

A: That's correct. It says that in 1986.

Q: And the 1995 AMA Guidelines still uses Crapo and Morris?

A: That's correct.

Q: And in 1998, the West Virginia Comp. Board still uses the Crapo and Morris?

A: That's correct.

Q: And that's right here in this area?

A: Yes.

Q: And it involves evaluation of a lot of older workers for pneumoconiosis?

A: But we have to also recognize that the Comp. Board is not strictly medical.

Q: Yes, sir.

A: The Comp. Board has legislative guidelines they have to go by, they have been given guidelines by the legislature, and these are not medical guidelines that they've been given.

Q: Yes, sir.

A: They have been legal guidelines that [51] they have been given.

Q: Right. I've got a brief history you told us you were going to decide for us yesterday that we never decided. It might be a reasonable time to take a break.

THE COURT: Okay, go ahead, we'll take the a few minutes.

(WHEREUPON, a recess was taken, after which the following proceedings were had.)

THE COURT: Go ahead.

BY MR. RION:

Q: My next question was diffusing capacity issues. Do you know Dr. Rasmussen from up in Beckley?

A: Yes, I know him.

Q: Do you know whether he uses Crapo and Morris?

A: I have no idea.

Q: You just don't know one way or the other?

A: No.

Q: How about the—and I may have the name wrong, the Appalachian Laboratory up in Beckley?

A: I know that's the laboratory he uses [52] but I don't know what they use.

Q: Okay. Are you familiar with the concept—let me back up a minute, Doctor, you'd agree that if somebody has obstruction from smoking, it can actually, in some instances, increase their total lung capacity?

A: Yes.

Q: It can, not always, but it can make it go up, and that's not a good thing, it's due to increased dead air space?

A: Yes.

Q: Roughly speaking, and on the other hand, asbestos disease can cause restriction, correct?

A: That's correct.

Q: And it can, although it doesn't always, but it can make your total lung capacity go down?

A: That's correct.

Q: And there's some indication in the literature that you see, in some instances, that you may see asbestos exposed workers who smoke cigarettes who have—may have preserved normal total lung capacity because of combined obstruction and restriction pulling in opposite directions,

that's something that's been discussed in the literature, hasn't it?

[53] A: Yes.

Q: Okay. You and Dr. Gaziano, as far as you know, are both B-readers?

A: Yes, sir.

Q: Did—you've been certified for how long?

A: Since 1981.

Q: Since '81. Have you published any articles on asbestos disease?

A: No, sir.

Q: In—have you seen Dr. Gaziano's reports?

A: Yes.

Q: And just you and he just have reported differences in how you read these men?

A: Yes, sir.

Q: Now, you'd agree asbestosis is an interstitial lung disease?

A: That's correct.

Q: And it can cause an increase in interstitial markings?

A: Yes. Now, you have to remember that it's one of about two hundred interstitial lung diseases.

[54] Q: Yes, sir, and—but I believe the ATS statement we've looked at says that if you have a diffuse pattern of interstitial fibrosis on a chest xray, and asbestos exposure, then what they say is you can presume the changes are due to asbestos because other forms of interstitial fibrosis are "comparatively rare." That—that's—is that what they say?

A: That's true, provided you can eliminate other compounding diseases that can cause that.

Q: Which study calls that?

THE COURT: Let him finish the answer.

BY MR. RION:

Q: I'm sorry. Go ahead, I'm sorry. I didn't mean to interrupt you.

A: I just said provided that you can eliminate other compounded diseases that may ____ at any time.

Q: I wanted to look for a second at the quote from the ATS statement that we just talked about, and I think this is—I'm not disagreeing with what you said, I think this sort of just states, in summary, what—no, up one, down, up, there you go.

It says, if you read along with, "Given a clear history of exposure to asbestos, a diffused [55] interstitial fibrosis can be presumed to be due to the asbestos," are you along with me, right about the conclusion, I'm sorry, right along in here (indicating), "However, given . . . ," yeah, "However, given a clear history of exposure to asbestos, a diffuse interstitial fibrosis can be presumed to be due to the asbestos as other forms of interstitial fibrosis are relatively uncommon."

"The prevalence of lesser degrees of interstitial fibrosis is not well known and considerable caution has to be exercised in attempting to attribute in all such phenomenon of asbestos exposure, either known or ____," and I think from what you just said earlier, you essentially agree with this statement?

A: Well, yes, and then, what I said, also, is contained in the first part of that paragraph, which reads, "A major problem exists in the differential diagnosis when more than one disease is present, whether it is congestive heart failure, COPD, or aquatic lung disease. There are diseases unrelated to asbestos exposure but with similar symptoms, and these may occur in some persons with asbestos exposure."

Q: Then they go on and read, "But given a clear history of exposure—"

[56] A: Yes, that's what you read.

Q: Okay, thank you. The—would you agree that although cigarette smoking can cause some changes that you might see on the chest x-ray, a trained B-reader can tell the difference between dust disease and those changes?

A: Well, that's—the x-ray, that's the problem with the x-ray because there's so many other factors that I draw the statement that is in—you referred to Parks earlier?

Q: Yes, sir.

A: On occupational lung disorders. This is from the Third Edition of Parks. It's on Page 435, and it is in the second column, the first—or the second full paragraph, and it says, "The differential diagnose of small irregular opacities must be clear to ancient cigarette smoking."

"The radiological effects of which are discussed in the next section. Crowding of the vascular lung basis due to poor inspiration," and, of course, we have a perfect example of that in Mr. Spangler. It's not poor instillation, it's because of the bullous disease, it's crowding the lung basis, "and obesity," which I mentioned before can confuse people with the x- [57] ray diagnosis.

"These are all conditions liable to lead to a mistaken diagnosis of asbestos related disease, and similar small opacities may arise from a number of other unrelated diseases," and then it says, "An independent reevaluation by three expert radiologists who in reading graphs of 439 subjects suspected in one survey of having asbestos related disease, found valid radiographic evidence of only eleven, which was two-and-a-half percent."

So, it is—there are a lot of compounding factors in reading the x-ray, and that's why I said that it's difficult to train someone in a very short period of time to read those x-rays. There are so many other factors that have to be taken into consideration.

For instance, when you put up the standard films the other day and compared those, those are people with—who have been considered to be quality I films. The technique from quality film could deteriorate to detract a reader.

Also, those films were not in people who were obese. They were in people who were nonsmokers, and so forth, and they were considered to be the best possible example, but we don't deal with the best possible [58] example in the real world.

We have to deal with the x-rays of people that are overweight, or tobacco smokers, or heart failure, have had pneumonia.

Q: Would you agree, in persons exposed to asbestos, that asbestos is the predominant or main cause of interstitial fibrosis in those people?

A: That's correct, because diffuse interstitial pulmonary fibrosis otherwise is a rare disease.

Q: Yes, sir. I wanted just to show you, and I'm sure you're familiar, we'll show the members of the jury, what the surgeon general had to say about this, and you're familiar with a book published in '85 on the health consequences of smoking, cancer, and chronic lung disease in the work place?

A: Yes.

Q: A little blue book that's sometimes called—on Page 270, there's some information about that under paragraph six, there. Could we show that? It says, "Asbestos exposure is the predominant cause of interstitial fibrosis in populations with substantial asbestos exposure."

"Cigarette smokers do have a slightly higher [59] prevalence of chest radiographs interpreted as interstitial fibrosis than nonsmokers, but neither the frequency of these changes, nor the severity of the changes, approaches levels unfound in populations with substantial asbestos exposure." Would you generally agree with that statement as a whole?

A: Well, I do but it's talking about populations with substantial asbestos exposure.

Q: Yes, sir.

A: And they're talking about minors and millers and insulators and people that really are exposed very heavily.

Q: Yes, sir. They would agree with the quote, though?

A: Yes.

Q: Okay. I want to talk just a little bit to you, Dr. Renn, about your consulting work that you've done for law firms and corporations. You've set up a separable—assortable separate corporation for your work related in such matters, is that correct?

A: Well, yes, but it's not for me alone.

Q: You and—do you have a partner in it?

A: Yes.

Q: One partner?

[60] A: Yes.

Q: And what's the name of the corporation?

A: It's Environmental Occupational Exposure Consultants.

Q: And it's within that corporation that you do work like this where you examine workers and legal work, that type of thing?

A: Yes, but it's not exclusively legal work because we do pre-employment evaluations for companies. We do pre-employment for Mylan Pharmaceutical, for instance up in Morgantown. We do that for examinations, annual examination for the Department of Energy, NIOSH.

We do them for coal companies, pre-employment. We do pre and post work exposures for asbestos workers who are—well, not asbestos workers but asbestos removal workers.

Q: You mentioned on direct examination a figure, and I think I remember the figure but I'm not quite sure I remember what it related to. You mentioned a figure of billing of somewhere around 1.8 or 1.9 million total, for something, do you recall that on your direct?

A: That's since the beginning of the time [61] that I first became involved in asbestos litigation, which is somewhere, I forgot.

Q: Ten years ago?

A: '86, '87, something like that.

Q: Ten or eleven years ago?

A: Yes.

Q: And, that 1.8 million for work—medical, legal work in asbestos cases, was that what the figure related to over that period of time?

A: That's correct.

Q: And, you mentioned you've done some work at the request of lawyers representing plaintiff's, including Mr. Humphrey's firm, on a few occasions?

A: There were more than a few.

Q: Yeah. If you were to take this 1.8 million and say—would you agree with me, probably, at least 1.5 million of that comes from work done for either defendants or law firms representing defendants?

A: I would agree with that.

Q: Okay. Maybe a little more in one point in time?

A: Well, I don't know.

Q: Would 1.5 be a good estimate?

A: That'd be good.

[62] Q: Okay, for defendants. So, the vast majority of work you've done has been for defendants, although you've done some for plaintiffs?

A: That's correct. I don't turn away anyone. Anyone who requests the work I'll do it for them.

Q: Now, would you also agree with me that of the workers who've been sent to you for asbestos evaluations, you've, in some instances, diagnosed asbestosis?

A: Yes, sir.

Q: But you'd agree with me that in the vast majority of the cases you have found no asbestos disease?

A: Well, I don't keep the records like that.

Q: Just from your recollection, I'm asking you?

A: See, a lot of cases that they come out of Baltimore that seem like they're all mesothelioma cases.

Q: Yes, sir.

A: So, if I have to say restricted to Baltimore, than I'd be saying that the vast majority [63] have an asbestos related disease.

Q: Let me back up, then, let's say out of the workers who don't have cancer who you have been sent through your lab for pulmonary function tests and x-rays, who you are personally examining for asbestosis, would you agree with me that you, in the majority of those cases, do not find asbestos disease?

A: It depends upon the work they did. I had a series of insulators come in that I found the majority of them did have asbestos disease.

Q: I'm just talking about—oh, I'm sorry, go ahead. I didn't mean to interrupt you.

A: In, if we took another series of, for instance, there were some cable pullers that were down here in Charleston that were examined for asbestos disease and I found none of them to have any asbestos disease. So, it's a wide range depending upon what actually they'd done and how much exposure they've had.

Q: But if we take all of the workers you've examined over these ten years, would you agree with me that in more than half the cases you've probably found no asbestos disease?

A: I would agree—actually, I don't know. I really don't know.

[64] Q: Yes, sir, and this is not the first time you've seen cases for railroads?

A: That's correct.

Q: You've done that probably during most of the ten years you've been doing this?

A: No, sir.

Q: How long have you been doing them?

A: I'd say it probably five, maybe six. I can't remember exactly.

Q: Yes, sir, and in addition to the N&W you've seen them for the CSX?

A: Well, I'm sure I have. I don't keep track of which railroad it is.

Q: And the Burlington Northern?

A: I don't know. Again, I don't keep track of the railroad.

Q: Have you ever testified that you've seen cases for CSX and the Burlington Northern?

A: I would guess that's true, but I don't—I just don't recall.

Q: Yes, sir, but you agree you have testified under oath that you've seen cases before?

A: I probably have, yes, sir.

Q: Okay, and you've gone down—can you [65] tell us what the National Association of Railroad Trial Counsel is?

A: I imagine they're—I don't know for sure, but I guess they're people that work for the railroads and do the—

Q: Try cases?

A: —and try cases.

Q: Yes, sir, and you've gone down to give a talk to the National Association of Railroad Trial Counsel, haven't you?

A: I guess, if that's who they were.

Q: Yes, sir. Let me see if I can refresh your recollection on that, could I have the 11-27, 28 deposition of trial testimony? Doctor, do you remember the case of *Clyde Surbaugh versus CSX Transportation*?

A: I think so.

Q: That was up in Berkeley County, West Virginia, November 27 and 28, 1995, does that help refresh your recollection?

A: I believe so, yes.

Q: And the Judge's name was Thomas Steptoe?

A: Yes, that was the name when I was growing up. Yes, that's where I grew up.

[66] Q: Does that help refresh that you might have been there?

A: That's right.

Q: Yes, sir. Okay, and you were asked on Page 129, Line 20, "A couple of years ago or within the last couple of years, you spoke to the National Association of Railroad Trial Counsel in Miami, do you recall that," and your answer then was, "Yes," in '95, does that help refresh your recollection?

A: Yes, I probably did. I just don't know who they were.

Q: All right.

A: Actually, I didn't speak, it was—they sort of had a mock trial thing.

Q: Where they were practicing trying these cases?

A: Yeah, they used me as an expert witness.

Q: Yeah, okay. So the Railroad Trial Counsel, then, is similar to what Mr. Lafferty, who was representing the railroad, was doing, is that correct, you said the Railroad Trial Counsel would be people who try cases for the railroad?

A: Yes, sir.

[67] Q: Okay, and I think you indicated in the same trial there that you've seen cases for hundreds of firms in about ten different states?

A: Yes, sir.

Q: And, all—

A: That's not all railroad workers.

Q: Yes, oh, I'm talking about—

A: All types of respiratory injurious substances that could possibly cause a disease process.

Q: And that's in about—but you'd agree hundreds of different law firms in about ten different states?

A: Yes.

Q: All right, and all of your appearances in jury trials in asbestos cases have been at the request of defendants, haven't they?

A: Yes, sir.

Q: You also work in black lung cases?

A: Yes, sir.

Q: I think you've indicated that's primarily for lawyers who represent the coal companies?

A: That's correct.

Q: And you've done work in diesel fume cases also?

[68] A: A few. Very few.

Q: And that's primarily either for a coal company—for lawyers representing the coal companies or railroads?

A: Yes, sir.

Q: And, that's all I have. Let's talk about each case, individually, now, and I've got them—actually, I've got them in the order that I had my notes in when I started going through this. Mr. Vance being the first case. I'm sorry, do you got your file on Mr. Vance?

A: Yes, I do.

Q: I think you interviewed Mr. Vance and talked to him about his exposure history and determined that he did have the history of exposure and the latency that was required by the ATS?

A: Yes, sir.

Q: Mr. Vance had a relatively substantial smoking history, did he not?

A: Yes. He had a range of forty-seven to seventy-one pack history. Yes, sir.

Q: On the other hand, it appears, does it not, that he's simply one of these individuals who has not developed any significant impairing respiratory [69] impairment from his cigarette smoking, would you agree with me on that?

A: Yes, it's not something I tell my patients.

Q: Well, I understanding [sic].

A: Because only, of those who smoke, the ones who develop obstructive lung disease, there'll only be about one-fifth that will develop obstructive lung disease, the other eighty percent do not develop obstructive lung disease, but they're still at risk for other diseases like lung cancer, that

we've talked about, heart disease, cancer of the urinary bladder, and so forth.

Q: But he's apparently quit smoking?

A: Yes.

Q: And he's—is one of those lucky individuals who didn't develop any significant lung impairment from smoking?

A: That is correct.

Q: Okay, thank you. He has a controlled hypertension, I think you indicated in your records?

A: Well, it's not really controlled, it's inadequately controlled.

Q: Yes, sir. Okay, well, his—some of [70] the records from his treating physicians indicate that they believe that his cardiac problems are not what's causing any shortness of breath that he's experiencing, is that correct?

A: I don't even know that he has any cardiac problems.

Q: Well, I wanted to—

A: Unless you're talking about the high blood pressure. The high blood pressure's not really considered a heart problem, it's a cardiovascular problem.

Q: Yes, sir, but whatever cardiovascular—his treating physicians have indicated that they don't believe his cardiovascular problems are causing shortness of breath or do you have anything on that?

A: Well, I don't have anything on that but—

Q: Do you agree?

A: I would agree.

Q: Could we look at the 10-24-97 electrocardiogram that is in evidence already, do you have it up there, the whole—I can be able to hand to Dr. Renn? This has been previously admitted. Well, it's in evidence as 10-24-97 Scherer Heart Center [71] electrocardiogram, and I want to give you a complete copy of that, Doctor.

Look through it for just a minute. This is Exhibit 5 that's already in evidence. Just generally looking through that,

Doctor, have you read enough to see that he was complaining of some shortness of breath?

A: That's the reason he had the test performed.

Q: Yes, sir.

A: Shortness of breath and chest pain with exertion.

Q: Yes, sir. I wanted to go to the last page and just ask you to read along with me. I've got your last page—I may have your last page. It says, "His echocardiogram was also normal. I do not find any evidence of coronary disease and I think that his dyspnea," and dyspnea means shortness of breath?

A: Yes. It means increased work of breathing.

Q: ". . . . is related to pulmonary disease, and therefore pulmonary function studies were done and showed—this does show moderate restriction lung disease most likely due to—related to exposure to asbestosis in the past," and what I wanted to ask you, [72] Doctor, when you did your—in this case, you did a report—first of all, I take it, you certainly—you indicated that you disagree with the diagnosis of asbestosis?

A: Yes, sir.

Q: When you—when you did your report in this case you wrote a report with a letter to the lawyers who retained you, did you not, do you have your report that you wrote in this case?

A: Yes, I have my report.

Q: And I think in your report, did you have a list of—you had some historical medical records available to you when you wrote your report, correct?

A: Yes.

Q: And I believe this was not one of the records you had at the time you wrote your report, is that correct?

A: That's correct. It's not in the list.

Q: Yes, sir. If—we talked a little bit about cancer risks earlier, and although you think Mr. Vance does not have asbestosis, you'd agree with me, would you not that he—

because he's got asbestos [73] exposure that he would be at an increased risk for mesothelioma?

A: Well, let's back up one—

Q: Yes, sir.

A: —before we get there.

Q: Yes, sir.

A: Because this summary sheet or progress note that you read from is 10-24-97.

Q: Yes, sir.

A: And, the echocardiogram that Dr. Shear refers to is reported—he says it's normal here, and yet, when you read it it was not normal.

Q: Uh-huh.

A: He says that this is a normal echocardiogram stress test with no evidence of asemia, hypertensive blood pressure response to stress, so it's not strictly a normal test—

Q: Uh-huh.

A: —because you've got a hypertensive response, which was my point about his hypertension being inadequately controlled.

Q: Yes, sir. On the other hand, you'd agree it didn't show—as you made the distinction between hypertension and cardiac disease, didn't show [74] any cardiac disease?

A: That is correct.

Q: Okay. Is that all you have on that?

A: Yes.

Q: Well, going back to or finishing up, you'd agree that because of his asbestos exposure, Mr. Vance has an increased risk of mesothelioma?

A: Yes.

Q: Let's talk for a minute about Mr. Butler. Do you got your file on him?

A: Yes, I do.

Q: Mr. Butler you also talked to about his dust exposure history?

A: Yes.

Q: And found that he did have a history exposure and that he had sufficient latency past?

A: Yes.

Q: Your records indicate that he quit smoking in the mid '60's?

A: I said 1960.

Q: 1960, I thought it was '65, but, anyway, you'd agree that there was no lung impairment that you would relate to his smoking?

A: Yes, sir. That's correct.

[75] Q: You indicated that—you marked on the ILO form that there's a place where they ask, "Are there any pleural," and that means lining of the lung, does it not?

A: Yes.

Q: ". . . pleural changes consistent with pneumoconiosis," and I think on that particular form, did you mark yes on that question?

A: Yes.

Q: So he had some pleural changes on the lining of his lung, as I recall that you said looked consistent with what you'd expect on the form with the finding consistent with pneumoconiosis, but you had some question about whether it could be due to that?

A: That's correct.

Q: But as far as, you have to put a yes or no on the form, and on the form you did put a yes?

A: That's correct.

Q: And, assuming for a minute that we assumed that this is due to asbestos, you indicated that determinology would not be to call this asbestosis?

A: That's correct.

Q: Do you recall that—we probably can agree that it was an asbestos—if it is an asbestos [76] pleural change, one neutral way to characterize it that everybody could agree to would be asbestos related pleural changes?

A: Yes.

Q: And you'd agree that from a pathological standpoint an asbestos related pleural change is an injury to tissue?

A: Yes.

Q: Now, there's some—you'd agree, would you not, that at least in the earlier stages, the fibrosis—interstitial fibrosis in asbestosis often is more predominant in the basis of the lungs?

A: Well, not often is, it is.

Q: Always, good. The basis just means the lower part?

A: Yes.

Q: All right. So, I wanted to show you—so you'd expect in early—in asbestosis to see interstitial fibrosis down in the lower part of the basis of the lung?

A: Yes.

Q: I wanted to show you an x-ray report dated 9-9-90 on Mr. Butler. Do we have a copy for Dr. Renn, please? This is—I don't believe this is— [77] let me—maybe I've got the wrong date, could we try 4-13-93? I'll tell you what, we'll read—put the thing up and we'll read the whole thing, Doctor.

This is 9-90—excuse me, 4-13-93, is the date. It says, "No significant interval changes has occurred in the appearance of the chest which demonstrates underlying changes of COPD, mild basilar fibrotic changes, and left ventricular prominence."

"There are no superimposed _____, pleural abusions, atelectases, pneumothorax, or CHF. Mild osteoporosis and," how do you pronounce that next word?

A: Cytosis.

Q: ". . . cytosis are present in the thoracic spine. Impression portable chest without acute cardiac or pulmonary disease," and it says, "underlying chronic obstructive pulmonary disease, basilar interstitial fibrosis, calcified lymph nodes from prior granulomatosis disease and left intraocular prominence."

You'd agree—although in this case you'd disagree that there's x-ray evidence of asbestosis to make things clear, right?

A: Well, I disagree with that also. I disagree with the fact that there's chronic obstructive pulmonary disease.

[78] Q: Yes, sir, but—

A: And this is also a portable chest x-ray which seriously deteriorates the quality of the x-ray and should not be read—a B-reader shouldn't perform a reading on a portable x-ray.

Q: But it, nonetheless, it makes a finding of basilar interstitial fibrosis?

A: He does, but then, because he made the finding of COPD, or chronic obstructive pulmonary disease, I'd suspect what he's really reading there.

Q: But, nonetheless, if the finding is correct it is the type of x-ray finding that basilar interstitial fibrosis is the type of finding one would expect with asbestosis, subject to the qualifications you've made about this particular situation?

A: That's correct.

Q: Fair enough?

A: Yeah.

Q: Now, you, again, in this particular case, did a report to the lawyers representing the railroad when you finished your review and evaluation?

A: Yes, sir.

Q: And, did you—and you had some medical records available then?

[79] A: Yes.

Q: And was this x-ray report one of the medical records you had available when you did your report?

A: No, sir.

Q: Okay. Now, you'd again agree with Mr. Butler that because of his asbestos exposure, he has some risk of the cancer mesothelioma?

A: Yes, sir.

Q: All right. Let's talk about Mr. Shirley next. Ready?

A: Yes.

Q: You took a history of dust exposure with Mr. Shirley also?

A: Yes.

Q: And after talking to him you decided he did have the history of exposure and enough time had passed that the latency was satisfied?

A: Well, not after talking with him. I mean, if a person comes in and tells me that they have been exposed to asbestos, I'm not in any position to judge whether they have or have not?

Q: Yes, sir.

A: And so I accept it, and then set it out [80] determining whether or not they have actually developed the disease process that is consistent with their exposure to asbestos that they say they've had, but, likewise, I take the whole work history from the time they left school, because I'm interested in all the possible exposures that could've possibly effected their respiratory system.

Q: But you also make sure that, if they describe the history of exposure, that there's sufficient latency to have passed to satisfy that requirement?

A: Yes, that I do.

Q: And he did satisfy that requirement?

A: Yes.

Q: All right, and Mr. Shirley is someone who, for all practical purposes, never smoked?

A: That's correct.

Q: And there was no respiratory impairment from smoking in his case because he—the only smoking he'd had maybe had been trying a cigarette as a kid?

A: Yes, sir.

Q: And he did show—he did show some decrease on the diffusing capacity on the single breath?

A: Yes, he did.

[81] Q: And, again, as far as measuring impairment, if there's been a loss of lung volume the DLCO single breath is a tool that has some significance in measuring gas exchange impairment under some circumstances, it's not a meaningless figure is it?

A: No, it's not meaningless.

Q: Now, there was also a 1995 film that you looked at, that when you looked at the '95 film and were asked the question, "Are there any x-ray changes consistent with pneumoconiosis or dust disease when you originally saw the film," you did check yes but then filled in some comments in the comment section, is that correct?

A: Yes. There were a number of x-rays in '95.

Q: So, if the '95 x-rays showed some suspicion of fibrosis but you were thinking it could be due to other causes?

A: That's correct.

Q: And you felt like because, in your opinion, the later films didn't show the same changes, you decided it wasn't asbestos?

A: Asbestos doesn't disappear.

Q: Now, if Mr. Shirley had, when he was in [82] the hospital then, had a pneumothorax, did you have the records on that?

A: Yes.

Q: And if we—

A: Yes.

Q: Yes, sir. It would appear to you that he recovered from that?

A: Yes.

Q: Okay. Now, you also heard, when you put the stethoscope to his lungs, you did hear some form of crackles, correct?

A: I believe he was the person—yes, he was. They were on the right side only and they somewhat disappeared after he gave a deep cough.

Q: So you and I could agree on this one, crackles are a finding that if they meet certain criteria, can help support a diagnosis of asbestosis, Number One?

A: That's correct.

Q: And in this case, you heard some crackles, but in your judgement you didn't think they were the type in nature that would support a diagnosis?

A: Well, that's because they should not disappear after a deep cough, and they should be on both [83] sides.

Q: On the other hand, Dr. Gaziano's records reflect that he heard bilateral crackles, and I guess that just depends on what you hear?

A: I guess that's why.

Q: I mean, he said the same thing. I asked him about, you know, how do you explain the difference and he said, you know, I hear what I hear and I assume Dr. Renn hears what he hears and that's all he would say. So, if we, I mean, if we look at the ATS findings on Mr. Shirley, we'd agree he's got the history of exposure and the latency?

A: Yes.

Q: On the x-ray, there are x-ray findings that you'd agree earlier on looked consistent, but because of changes you perceived later you decided would not support a diagnosis?

A: Well, and that's what I stated on that same issue under comments.

Q: Yes, sir. I asked that. That is correct, isn't it?

A: Yes.

Q: And he's got a diminishment in his single breath diffusing capacity but he corrects the [84] normal for alveolus volume?

A: That's correct.

Q: And he's got crackles, but they're, in your opinion, one-sided, so not consistent with asbestosis?

A: That's correct.

Q: And, you would agree he has a risk of mesothelioma because of his asbestos exposure, wouldn't you?

A: Yes.

Q: Okay. Let's now talk about Mr. Ayers. Mr. Ayers satisfies, does he not, the requirement of the exposure and the latency?

A: Yes, sir.

Q: And, in your opinion, does he have any significant respiratory impairment from smoking, although he did smoke?

A: He has a bit of mild obstruction but it's not that significant. It's not causing him any real symptoms.

Q: You'd agree that to the extent he might complain of symptoms of shortness of breath, you wouldn't blame his cigarette smoking?

A: No, I'd blame the cumulative diseases [85] that he has.

Q: All right. Are you aware that one of his treating doctors has, in his records, has diagnosed asbestosis?

A: No, sir.

Q: Could I have Dr. Jana Peters records? This is a copy of Dr. Renn.

THE COURT: Okay, why don't you just use your exhibit. I mean, you've admitted those to evidence.

BY MR. RION:

Q: I anticipated that I might have trouble finding them. This is exhibit 7, in evidence. This is from Dr. Jana Peters in Princeton, West Virginia. Let me ask you if this appears to be some handwritten notes?

A: Yes.

Q: And that's a typical doctor scrolling that's kind of hard to read, at least for us—some of us lay people, although, his, actually, is not too bad, correct?

A: That's not too bad.

Q: And if we—if—the symbol DX normally stands for diagnosis, does it not?

A: Yes.

[86] Q: And under DX, or diagnosis, Dr. Peters has written, "Bronchitis," which would be due frequently to cigarette smoking, correct?

A: Well, no. Most acute bronchitis is caused by infectious agents.

Q: Okay.

A: Most viral, some bacterial.

Q: All right, and then Number 2's—is that sinusitis, Number 2?

A: Yes.

Q: And that's a problem with your sinuses?

A: Yes, sir.

Q: And Number 3, he's written in here, "Asbestosis," under diagnosis?

A: Yes.

Q: Now, when—can you go back to your report in this case?

A: (Witness complied.)

Q: You had, I believe, some medical records available to you when you did you report in this case, did you not?

A: Yes.

Q: And you listed them in your report?

A: Yes.

[87] Q: And was this—was this record one of the records you listed in your report?

A: It was not.

Q: Okay. Would you agree that because of his asbestos exposure, Mr. Ayers has a risk of mesothelioma?

A: Yes, I would, but I'd like to back up to start—

Q: Yes, sir.

A: —this diagnosis—

Q: Yes, sir.

A: —of asbestosis.

Q: Uh-huh.

A: This is the first—this is a first encounter with this person—

Q: Uh-huh.

A: —apparently, on 5-8-95, and it says under past significant medical history, gout, increased blood pressure, arthritis, asbestosis—

Q: Uh-huh.

A: —MI eight years ago. It's not—

Q: MI means?

A: My inquiry.

Q: I'm sorry, I didn't mean to interrupt [88] you, continue.

A: And, if it's a common practice of the doctor if the person has something in their past medical history that they are aware of, they might put it into their diagnosis, and then consider it later, and, with these records that you handed me is an x-ray report dated that same day, 5-8-95, and it's by Dr. Rombia, who I know is a B-reader, and he read the x-ray as, "Underlying COPD and changes of bronchiolitis with no pneumonia."

So, he didn't read anything about interstitial fibrosis or asbestosis or anything like that. So I don't know where Dr. Peters, who—I don't know Dr. Peters' qualifications, but I don't know if Dr. Peters is an x-ray doctor or just—or a family practitioner, or what. So I can't—I don't have any basis for that particular diagnosis.

Q: But you'd agree, he included asbestosis, not just in the history but under the category of diagnosis?

A: Yes, he did, but I don't know his basis for this.

Q: All right, let's back it up, I think I was on the subject of you'd agree that Mr. Ayers, [89] because of his asbestos exposure, has an increased risk of mesothelioma?

A: Yes, sir.

Q: Let's talk about Mr. Doyle Johnson. Let me know when you get organized with him.

A: I have his report, yes, sir.

Q: Yeah. Tell me what your report on Mr. Johnson says about his dust exposure.

A: Well, the report says from 1952 until 1957. However, that's a typographic error. I was—when I was looking through his record I went back to my original notes and it should read 1952 to 1987.

Q: Uh-huh.

A: And then he said that he worked as a track laborer until 1960 and then was a machine operator for N&W Railroad, and he believed that he'd been exposed to asbestos, and he said for a period of three weeks in 1984 he worked on a crane that had friction bands containing asbestos, and after three weeks the bands were replaced with another substance.

Q: And that's all you have. You didn't have in your history anything about exposure to coal?

A: No, sir.

Q: On the other hand, you felt like, as [90] far as asbestos was concerned, he had a history and an appropriate latency period?

A: Yes, I did.

Q: And, if we look at the test you did, his diffusing capacity was down, was it not?

A: Yes, it was.

Q: And this is—this is a finding indicating some laboratory detectable problem in gas exchange?

A: Well, not at that level. There are studies that are done on diffusing capacity, and if it is above, in fact, I believe in the AMA Guides, if it's above sixty percent of predictive, there's no hypoxemia.

Q: Yes, sir.

A: I believe, clinical hypoxemia, and then there are papers that state that it's even more than that, that it's above fifty percent of predictive.

Q: I used the wrong term. All I meant to say, and you're—I think you corrected me. I asked the wrong question, but his diffusing capacity finding was abnormal?

A: Yes.

Q: That's really what I meant, and an abnormal diffusing capacity finding is one of the things [91] the ATS paper says you should look for?

A: That's correct.

Q: Now, he had some degree of obstructive lung disease, or did he, I wrote in my notes he did?

A: Yes, he did.

Q: And you've agreed with me that coal dust exposure is something that can cause obstructive lung disease?

A: Yes, it can. However, if coal dust exposure causes obstructive lung disease it doesn't cause a bronchial reversible obstruction lung disease, and he had bronchial reversibility. He had significant bronchial reversibility by the American Thoracic Society criteria for that.

Q: Would you blame his cigarette smoking for any of that?

A: No, sir. I just believe that he has asthma, a mild asthma.

Q: So, as far as his cigarette smoking, do you believe Mr. Johnson has any significant respiratory impairment from cigarette smoking?

A: No.

Q: Okay, Mr.—let's just, briefly, again, on Mr. Doyle Johnson, you'd agree that because of [92] his asbestos exposure, he's at a risk of incurring mesothelioma?

A: That's true, but someone really needs to be looking more at Mr. Johnson's—the whole picture because of the possible pneumonia.

Q: He's testified that he's had that checked out and it has some indication that he has it, but it's controlled.

A: Okay.

Q: Yes, sir. All right. We're down to, I think I've got one more case to talk to you about and that is Mr. Spangler. If you could get your file on Mr. Spangler.

A: Yes, sir. I have it.

Q: All right. Now, Mr. Spangler had a fairly long history of asbestos exposure and he satisfied the latency requirement?

A: Yes, sir.

Q: And I think his diffusing capacity was also reduced?

A: Yes, sir.

Q: And it was abnormal?

A: Yes.

Q: And that, again, is one of the findings [93] that the American Thoracic Society says we look for in asbestosis?

A: Yes.

Q: Now, there—I want to go—again, you've indicated that asbestosis is an interstitial lung disease?

A: Yes.

Q: And it causes an increase in interstitial markings, primarily in the lower parts of the lung?

A: Yes.

Q: I want to go over with some x-ray reports, and I guess we'd start with 8-15-95. These, again, are all in evidence. Actually, I take that back, these are not in evidence, Mr. Spangler's x-ray reports, so I would just have this marked as Plaintiff's next—35.

(WHEREUPON, the document referred to was marked for identification as Plaintiff's Exhibit No. 35.)

MR. RION: Your Honor, I move the admission of Plaintiff's 35, Bluefield Regional Medical Center dated 8-15-95.

THE COURT: Questions.

[94] MR. RION: It's admitted, Your Honor?

THE COURT: Yeah.

(WHEREUPON, the document previously marked as Plaintiff's Exhibit No. 35, was admitted into evidence.)

BY MR. RION:

Q: Looking at this with me and you've got copies—or I never gave you a copy, I'm sorry. This is a portable chest x-ray, 8-15-95, and it does, does it not, say that there's in increase in interstitial markings?

A Well, it does say that but you have to take that into the context. This is a person that, apparently, is having pneumonia at this time, or resolving pneumonia, because it says, "Since a previous examination of 8-11-95, four days earlier, there has been a significant decrease in consolidation of the left upper lobe and left base with bronchograms noted, and I wouldn't—also this is a portable x-ray, taken ____ and you can't read a portable x-ray that finely, especially if you've got pneumonia.

Q: It does say here interstitial lung disease, does it not?

A: That's what it says.

[95] Q: And asbestosis is an interstitial lung disease?

A: Yes.

Q: And, Doctor—

A: So can pneumonia be an interstitial lung disease.

Q: But they were aware of the pneumonia and separately categorized it, did they not?

A: That's what he's—he says, "including left lung pneumonia interstitial lung disease."

Q: Yes, sir. Thank you. Could I also have 12-6-90? This is Bluefield Regional Medical Center, and I'd like to have this marked as Plaintiff's 36.

(WHEREUPON, the document referred to was marked for identification as Plaintiff's Exhibit No. 36.)

MR. RION: We move the admission of Plaintiff's 36, which is Bluefield Regional Medical Center 12-6-90 chest x-ray report.

THE COURT: I'm sorry.

(WHEREUPON, the document previously marked as Plaintiff's Exhibit No. 36, was admitted into evidence.)

[96] MR. RION: Can we place this on the screen also?

BY MR. RION:

Q: It says right here (indicating), that there is, looking at the top, increase in interstitial markings most evidence [sic] in the basis, and, again, I think you said that with asbestosis you get an increase incidence of interstitial markings and they tend to be most evident in the base of the lung, is that correct?

A: That's correct.

Q: And it—go ahead, I'm sorry.

A: The x-ray goes on about ____ and/or scarring in the left base, and as I remember Mr. Spangler's x-rays, he's the one that has the large Bullous emphysema, which is—which presses down upon the basis, and would compress the normal bronchial vascular markings in the basis.

Q: Yes, sir, but the impression was, "Interstitial and chronic obstructive pulmonary disease?"

A: Interstitial and obstructive pulmonary disease?

Q: Yes, sir.

A: Yes, sir.

[97] Q: Could I have x-ray report from Dr. George Couts? Could I have this marked as Plaintiff's Exhibit?

(WHEREUPON, the document referred to was marked for identification as Plaintiff's Exhibit No. 37.)

MR. RION: We move—

THE COURT: I got you.

THE WITNESS: Your Honor, I can't—

MR. RION: It's 1-12-81.

THE WITNESS: '81 or '90?

MR. RION: '81 or '90?

THE WITNESS: That's what I say, you don't know. I mean, I can't read it. I don't know what date it is. We need a better copy as to the date and so forth. I can't read it.

MR. RION: Well, we'll—Your Honor, I'd just like to show you a form—I think this is the best we have. It's from Dr. Lesnar's records, and this is—

THE COURT: You're question is what date this was done?

MR. RION: Yes, sir.

THE COURT: I'm not sure as to 1-12-81 or '91, but here's what I was—

[98] MR. RION: I don't know what the ____ necessarily.

THE COURT: Yeah. I—I'm not sure that it makes much difference whether it's '81 of '91.

MR. ADKINS: Well, Judge, I don't, you know, as long as there is no representation of what the date is. I don't know.

THE COURT: Well, I'll admit it with the understanding that the date is what it is?

MR. RION: Yes, sir.

BY MR. RION:

Q: This is another x-ray report, and could we put this one on the screen, and this is Dr. George King, and the impression here is pneumoconiosis, is that correct?

A: Yes.

Q: And pneumoconiosis is a dust disease of the lungs, correct?

A: That's correct.

Q: And going back to your report that you give to the lawyers in Mr. Spangler's case, did you have some medical records available then?

A: Yes.

Q: Did you have Dr. George King's record [99] here with the pneumoconiosis impression?

A: No.

Q: Did you have the 12-6-90 x-ray that noted increased in interstitial markings?

A: No.

Q: Did you have the 8-15-95 x-ray showing interstitial lung disease, or stating interstitial lung disease?

A: No.

Q: Could I have the 4-13-92 record on—This is a report of 4-13-92, which is in evidence.

THE ADKINS: What exhibit is it?

MR. RION: It's—that's what I'm looking for.

THE COURT: Exhibit 9, I think.

BY MR. RION:

Q: Exhibit 9, already in evidence, and ask, again, in the records that you have, or had available when you did your report, was this record in there?

A: No.

Q: And, if we look under here (indicating), the doctor's report, "Chest x-ray showed increase in interstitial markings in both lung basis. [100] The patient does have a history of emphysema. The patient has a history of asbestos exposure during his work experience."

Could we go to Page 2? Again, they noted increase in interstitial markings, do they not?

A: Yes.

Q: And it says under Number 2, "Chest x-ray is consistent with pulmonary fibrosis. I suspect the patient has asbestos exposure and may well suffer from asbestosis," and, again, this is a record that you, when you wrote your report to the lawyers you did not have?

A: That's correct.

Q: Dr. Renn, you'd agree that there—you have been involved in—there have been situations where you do these evaluations—where you do these evaluations at your office, and I think it used to be that you had a situation where the x-rays that you had made in your office had to be read by a hospital radiologist for insurance purposes, back when you first started doing this, do you recall that?

A: They had to be read because I was doing examinations at the hospital.

Q: Yes.

[101] A: The hospital has a contract with the radiologist to read all x-rays.

Q: Okay. Maybe I—it used to be that you did these evaluations at the hospital instead of at your own office, and because of that a hospital radiologist had to read the x-rays?

A: That's correct.

Q: And I think—can you—see if you can go backwards and remember that there have been situations back when you had to do that, where you would read the x-ray as normal and the hospital radiologist in Morgantown might read it as showing interstitial fibrosis during these exams, just generally, do you remember that as happened?

A: Well, that happened, but that happened because I went down and talked to the radiologist about reading the x-rays, and they had represented themselves to me as being qualified to read for pneumoconiosis, and it was later that I found out that they were not qualified to read for pneumoconiosis, that they were not B-readers, and had never even taken the examination or studied for the examination, and best—

Q: Yes, sir, but subject to that qualification I am right that back when the hospital [102] radiologist in Morgantown was reviewing all your records, there were situations where you would say the film's normal and a hospital radiologist would say it showed interstitial fibrosis?

A: Yes, and vice versa, and sometimes we agreed, also.

Q: Now, one—one last thing, on Mr. Spangler's x-ray there is a place on the B-reader form where it says, "Are there any pleural changes consistent with pneumoconiosis," correct?

A: Yes.

Q: And you did write yes on there?

A: Yes.

Q: So you'd agree that Mr. Spangler has a—some pleural abnormalities caused by asbestos exposure?

A: Yes.

Q: And that pathologically that represents an injury to his tissue—his lung tissue?

A: Yes.

Q: You—and there have been studies that authors have done where they've studied populations of people with pleural plaques to see if their lung function is any different than populations of people [103] without these pleural plaques?

A: Yes.

Q: And some of these studies have showed an increased incident of lung impairment in populations of people with pleural plaques compared to populations of people without pleural plaques?

A: They've shown a scientifically significant change, but not a clinically significant change.

Q: But they have—okay. They've shown a statistically different degree of lung function in the pleural plaques population compared to the nonpleural plaques population?

A: Yes, middle.

Q: But statistically significant?

A: Statistically significant.

Q: And significant by being lower in the plaques population?

A: Yes, but not to the point where it would cause symptoms, or respiratory symptoms.

Q: You, yourself, have had, in the past, used the term asbestos related pleural disease?

A: Yes.

Q: And you've even, in earlier days, [104] written reports to lawyers in these cases using the term asbestos related pleural disease?

A: Well, I think I still do. In fact, in Mr. Spangler, I say he has benign asbestos induced pleural plaques.

Q: And you don't have any problem calling that asbestos pleural disease?

A: No.

MR. RION: Okay. I believe I'm done. Judge, if you would allow me to consult with my colleagues to see if I forgot something.

THE COURT: Do you want to take a recess?

MR. RION: That would probably make sense.

THE COURT: We'll take a brief recess.

MR. RION: And I think I'm finished.

(WHEREUPON, a recess was taken, after which the following proceedings were had.)

(WHEREUPON, cross examination was concluded as the testimony continued.)

MR. ADKINS: I have, very briefly, a few questions for you.

MR. RION: Doesn't the lawyer who did the [105] direct do the redirect?

THE COURT: They should, but I'll permit it.

MR. ADKINS: Thank you, Your Honor.

REDIRECT EXAMINATION

BY MR. ADKINS:

Q Just a couple of questions, Doctor. You indicated, I think, in the cross-examination, that you felt like Doctor Gaziano did not use the correct interpretation according to Crapo on the DLCO.

Would you explain what you meant by that?

A He uses the 1981 Crapo prediction equations which came out of the American Respiratory Disease, and Doctor Crapo, in that paper presented two tables; one with prediction equations for the single breath DLCO, which is on page 186 of that paper, and on page 187, the prediction equations for DL/VA.

Q Again, the DLC, the VA is the correction?

A For ____ volume, yes. And in that, there are—this is a column which is titled Value Subtracted From Predicted To Set Lower 95 Percent Confidence Levels, and so the real way to interpret the Crapo prediction equations, if you use them, is you don't do it by a percent of predicted the way it is with [106] others.

You have to deduct the 95 percent confidence interval from the predicted value and then see whether or not the diffusing capacity that you found by testing the person is either above or below that.

And that's not what Doctor Gaziano does on his reports. He has a percent of predicted.

I sat down with Doctor Gaziano's reports and took the Crapo predicteds that he has and did the subtraction the way it is in Crapo's paper, and if you do the subtraction the way it is in Crapo's paper, Mr. Spangler, Mr. Shirley, Mr. Johnson and Mr. Vance have a reduced diffusing capacity by the Crapo standards.

Mr. Butler and Mr. Ayers do not. I believe that Doctor Gaziano said that in one of them.

However, if you take the Crapo paper and do the subtraction for the DL/VA and then compare that with Doctor Gaziano's findings in each of these gentlemen, only one of them is abnormal by the DL/VA, and that's Mr. Johnson.

Q Do you have, based on the history and the medical records and so forth of Mr. Johnson; is there a basis for the reduction in the DLCO corrected?

A Yes, he's the person who had the [107] pulmonary emboli, who had the vascular _____ which no longer has blood flow to a certain area of the lung, but he still has the lung tissue that is there to participate in breathing.

Q So, as I understand it, if you take the Crapo—if you use the Crapo predicted, and you follow the procedure that he recommends in his paper, and he did that in this case, using what Doctor Gaziano's test results and applied that; that all of them came out normal even under Doctor Gaziano's testing, with the exception of Doyle Johnson, is that correct?

A Yes.

Q If a patient has asbestosis, will his DLCO correct to normal?

A Yes. That is a statement that is made—actually Doctor Crapo made the statement. It's been made numerous places, but the statement is made in a paper that's by Crapo and Forrester. It's entitled "Carbon Monoxide Diffusing Capacity," and it appeared in *Clinics in Chest Medicine*, Volume Ten in June of 1989.

The statement that is made is on page 194 under interstitial lung disease, and it says, "DLCO and DL/VA are commonly abnormal interstitial lung diseases."

So, this statement is by Crapo himself [108] that interstitial lung diseases cause abnormality in both, and then if you look at another paper that appeared in *Chest*, called, "Clinical

Significance of Pulmonary Function Tests," and it's subtitled, "Use and Interpretation Single Breath Diffusing Capacity," and this is by Weinberger, Johnson and Wiese, and it says, "Diffuse interstitial lung disease is another chronic category disorder with a low DLCO. Although part of the decrease in diffusion is due to associated low lung volumes, DLCO is generally decreased out of proportion to volume, thus the abnormality is apparent even when compared with the predicted value based on VA."

So that establishes that the DLCO corrective for alveolar volume will still be abnormal in interstitial lung diseases.

Q In these particular cases, or these particular plaintiffs, again, the only one where that happened was with Mr. Johnson?

A That's correct. And whether or not you should use the DL/VA in interpreting the diffusing capacity, there is an—right after the American Thoracic Society published their official statement on diffusing capacity back in the mid-1980's, Doctors Rosenburg and Beckley—Doctor [109] Beckley is very prominent in studying asbestos people; she has studied Quebec miners quite a bit. And they wrote in a letter to the editor, and it's entitled, "Single Breath Carbon Dioxide Diffusing Capacity," and it says, "Because of the greater discriminatory power of DL/VA, that the above studies have demonstrated, it is our hope that appropriate prediction equations will be developed for DL/VA, as well as for DL in the next few years."

Then Doctor Crapo was allowed to reply to the letter, and he replied to the letter, and he says—and this was because of all of the committee members that published this official statement.

He says, "Many, if not most of the committee members use DL/VA routinely in interpreting diffusing capacity, and I think all would appreciate more information on this ratio."

So, if you just use the diffusing capacity, you are missing the true assistance of this particular laboratory, the true value of this laboratory test to help you in determining whether or not they have a disease process that is interfering with diffusion versus one that is causing lung destruction.

Q Okay, Doctor, I want to just ask you a couple [110] of other questions here, and then I'll sit down.

I want to go back to the ATS recommendations here dealing with the diagnosis of asbestosis, and I don't want to go back over what we've talked about here, but you made a statement on Direct that you did not need every one of these things, but there's a confidence level in terms of findings of these particular things.

Would you explain to the jury what you meant by that when you said it was a confidence level?

A If you have only the first two, the reliable history of exposure and the appropriate _____ period, but you don't have anything else that the doctor can go on or that the doctor can rely upon, then you don't know that anything has actually happened.

Part of the—the scientific method or the scientific proof of something is that first you determine a hypothesis or you determine that it could be possible, and so what the first two tell you really is that there could be an asbestos-related disease, but they don't tell you if there actually is one.

The scientific method is to then set about proving that your hypothesis is correct or incorrect, one way or the other.

It will be similar to, we know that a person [111] is standing on the curb waiting to cross the street, and we know that there are cars whizzing up and down the street, and then we don't see that person on the other side of the street.

Is it reasonable to say that well, they were run down, smashed flat, disintegrated by a car, or is it reasonable to say,

well, they got tired of waiting because there were too many cars and they turned around and decided to go around the block and go back the other way.

So that's all the first two tell you. Any doctor that relies upon the first two and then says there is an asbestos-related disease really doesn't have any scientific proof or evidence to do that.

So the only thing that we have clinically are basically the other four that are related there that are listed there, that you've heard way too much about already, and those other four, you might say since there are four of them, that each one would increase your confidence by 25 percent, until you could get up to be 100 percent confident.

Now that's not exactly true, but just for a rough guide you could say that, well, they've got number one, and I'm 25 percent confident. If they've got [112] number two, I'm 50 percent confident and so forth.

But they are given different weights. So, 25 percent is not fair to say.

Q Which one is given the most weight, Doctor?

A The most weight is given to the chest X-ray.

Q Doctor, is there anything in the Cross-Examination of Mr. Rion that changed your opinion about any—that you have given in this case or in these cases of these plaintiffs?

A No.

Q So if I asked you all those questions again about whether any of these individuals have asbestosis, your answer would be the same?

A Yes.

Q And if I asked you if they have any reduced diffusion capacity related to their asbestosis exposure, your answer would be the same that they do not?

A Yes.

Q Okay.

A Well, it was as it was. Some of them have reduced diffusion capacity, but—

[113] Q Related to asbestos or a diagnosis of asbestosis?

A No, not related to asbestosis.

MR. ADKINS: That's all I have, Doctor. Thank you very much.

RECROSS-EXAMINATION

BY MR. RION:

Q Just a few minutes, Doctor. Let's talk about this DLCO again. Now, if I understand, I want to get our terminology straight, and then we are going to go look at some recommendations.

As I understand, you have two scores here. One is going to be the DLCO, SB, and SB stands for single breath?

A Yes.

Q And that's the uncorrected. You can take that, and then you've got DLCO/AV, correct?

A VA.

Q And that means corrected for alveolar volume?

A Yes.

Q The single breath is uncorrected and VA is corrected alveolar volume?

A Yes.

[114] Q Now, if we go to the AMA—excuse me, the American Thoracic Society evaluation of impairment secondary to respiratory disorders, they say the test for single breath diffusing capacity should be performed by a method of Ogleby and coworkers or by a comparable method, do they not?

A Yes.

Q So they do recommend the single breath diffusing capacity, and they say the regression equations of Crapo and Morris are recommended?

A Yes.

Q If you go to the AMA guidelines for permanent impairment, they say—

A Before you get to the AMA guidelines—

Q Yes.

A —the evaluation impairment disability was written in 1986.

Q Yes, sir.

A If you remember, that was written before the comments by Rosenberg, Beckley and Crapo, where Crapo says, "Many, if not most of the committee members use DL/VA routinely in interpreting diffusion capacity."

Q Use both.

A Well, it's DL/VA. You are not talking [115] about that. He says in interpreting the diffusion capacity, but you do use both because they both have important clinical information.

Q They are both important?

A Yes.

Q If you go to the AMA guidelines for permanent impairment from 198—I believe this last edition, the Fourth Edition, is what 1995 or thereabouts?

A Somewhere in there.

Q They say here, "The single breath DLCO should be used for evaluation of all levels of impairment.

A That's correct, they do.

Q If we go to the work of the West Virginia Comp Board on occupational pneumoconiosis, they use the DLCO single breath for setting their impairments, do they not?

A That again is correct.

Q Now, I'm almost through. On this business about these findings—I think you and I agreed on this, and I don't think that you said anything different than what I'm about to suggest. You are not trying to say one finding is 25 percent sure; two [116] findings 50 percent; three is 75 and four is 100?

A No. That's just an example of level of confidence. That's all.

Q And it depends on—it's very much a matter of clinical judgment, and you said in some cases one of those clinical findings may be enough?

A Yes.

Q And sometimes, one may not be enough?

A That's correct.

MR. RION: Okay. That's it. Thank you.

MR. ADKINS: Judge, I believe I'd better not ask any more questions.

THE COURT: Thank you, Doctor. Let me have counsel up here for a second. You may step down.

THE WITNESS: Thank you, sir.

(WHEREUPON, the witness was excused.)

(WHEREUPON, the following proceedings were had at the Bench, in the presence, but out of the hearing of the jury, to-wit:)

THE COURT: Do you want to take a lunch

* * * *